

From the Spectator.

## MR. METHUEN'S WANDERINGS IN SOUTH AFRICA

Is a real book of travels. The traveller does not, indeed, like Mungo Park, explore unknown regions, exposed to robbery, slavery, continual peril, and imminent death; or, like some distinguished men of science, traverse little-known countries, in order to enlarge the bounds of human knowledge. He was exposed to no greater peril than the accidents of frontier and Kafir travel; he did not penetrate so far as several other travellers have done towards the mysterious centre of Africa; and the scientific knowledge of himself and his companions was very slender, reaching no further than the elements of natural history. Still, in comparison with a shoal of tours, in the other three quarters of the globe, Mr. Methuen's sporting excursion into the wilderness beyond the eastern frontier of the Cape colony is a welcome volume. There is interest in the locomotion which depends upon your own good wagon and oxen, or the subsistence, which is owing to natural pasture, water and game. There is freshness and variety in the landscapes—now of mountain wildness, now of desert waste and vastness, now of luxuriant vegetation; each scene, too, animated by its own animal denizens in a state of nature, to see any one of which is a sight in Europe. The commonest incidents of the journey are scarcely trite, when the silence of the night is continually broken by the roar of the lion, the laugh of the hyena, or the howl of the jackal; and the greater occurrences involve interviews with men and monarchs quite *au naturel*, or the chase of the giraffe, the hippopotamus, "the lion, and the unicorn," not to mention inferior creatures—which, however, include the crocodile, the buffalo, and some of the noblest or most beautiful animals of the deer and equine races. The traces of the elephant were followed; but only a very young one rewarded the toils of Mr. Methuen or his friends; neither was a hippopotamus secured, though several were hit, and mortally in the opinion of "followers."

The main attraction of the book depends upon its subjects and their freshness. The composition of Mr. Methuen is, however, entitled to a share of the praise. His style is clear, agreeable, and moderately animated. He has not the artistical skill, which, dropping all that is common, and bringing the more striking objects closer together, produces a greater effect than every-day Nature herself, without unnatural exaggeration. At the same time, some of his greater incidents often occur in a well-chosen locality; so that the description of the scenery and of the action are appropriate to each other, like the figures and landscape of a picture. It is a still greater merit that he has no verbosity, and little of mere opinion in the guise of reflection; above all, there is no book-making, or even undue expansion. He is silent as to his voyages, save in the case of a striking incident, and says but little either of the Cape or of the Border district of which Graham's Town is the capital, though what he does say is to the purpose.

This may be judgment, or experience; probably the latter; for Mr. Methuen has made several voy-

ages to the Cape, with a view to his health, which improving there, failed him on his return. The object of his last voyage was a permanent settlement; but, after fixing his head-quarters at Graham's Town, and examining the district, he abandoned the plan of purchasing a farm. Before returning to England, he and three other friends determined, in imitation of Major Harris, to make a sporting tour beyond the frontier. The narrative of their trip is contained in the present volume; which contains little else, as the introductory matter is very brief. And though the journey did not extend so far as that of Harris, or involve so much of new tribes and wild exploit, we perhaps feel surer of Mr. Methuen's narrative—he has less of the writer about him. The trip occupied about eight months—from May to December, 1844; the exact distance to which the party penetrated we do not know, for none of them could take an observation. Their last camping-ground was near the juncture of the Mariqua and Limpopo rivers; and Mr. Methuen thinks that he and a friend rode so far towards the north as to pass the 24th degree of south latitude.

The changes of every day in life upon the march, in a new country, give much variety of subject to the narrative; which can only be felt by a perusal. Some of the larger topics may be exhibited by quotations.

## NATIVE HUNTING AND GAME TRAPS.

"We had ridden within a mile of the mountains, which, clad in wood at their bases, and intersected by dark ravines, formed with their rugged summits a most striking object, when we encountered some Bakatlas, armed with shields and assegais. They talked very fast, and made many signs; from which we concluded that they knew where game was, and were desirous to lead us to it. Parties of men, however, shouting with stentorian lungs, issued from the bushes on all sides: a giraffe was seen striding rapidly away; presently a herd of quaggas, pallahs, gnoos, and ostriches, showed themselves. I shot a pallah and a quagga, right and left; but only obtained the horns of the former, the natives having skinned the head. Fresh bodies of men, running and halloing, burst in view, till we were completely mystified on the subject. The quaggas turned back, and I rode after them; and then, by the hedges on each side of me, first discovered the object of the natives, and that I had entered within the limit of their game-traps. Two wattle hedges, of perhaps a mile in width at the entrance, contracted to a long narrow lane, about six feet in breadth, at their termination, where were two covered pit-falls, with a number of loose poles placed in parallel lines above each other, at either extremity of the pits, to prevent any creature escaping or pawing down the soil. Noises thickened around me, and men rushed past, their skin-cloaks streaming in the wind; till, from their black naked figures and wild gestures, it needed no Martin to imagine a pandemonium. I pressed hard upon the flying animals, and, galloping down the lane, saw the pits choke-full; while several of the quaggas, noticing their danger, turned upon me, ears back and teeth showing, compelling me to retreat with equal celer-

ity from them. Some natives standing in the lane made the fugitives run the gantlet with their assegais: as each quagga made a dash at them, they pressed their backs into the hedge, and held their broad ox-hide shields in his face, hurling their spears into his sides as he passed onward. One managed to burst through the hedge and escape; the rest fell, pierced with assegais, like so many porcupines. Men are often killed on these hunts when buffaloes turn back in a similar way. It was some little time before Bain and I could find a gap in the hedge, and get round to the pits; but we at length found one, and then a scene exhibited itself which baffles description. So full were the pits, that many animals had run over the bodies of their comrades, and got free. Never can I forget that bloody, murderous spectacle; a moving, wriggling mass of quaggas, huddled and jammed together in the most inextricable confusion: some were on their backs, with their heels up and others lying across them; some had taken a dive and only displayed their tails; all lay interlocked like a bucket full of eels. The savages, frantic with excitement, yelled round them, thrusting their assegais with smiles of satisfaction into the upper ones, and leaving them to suffocate those beneath; evidently rejoicing in the agony of their victims. Moseleli, their chief, was there in person; and after the lapse of half an hour, the poles at the entrance of the pits being removed, the dead bodies, in all the contortions and stiffness of death, were drawn out by hooked stakes secured through the main sinew of the neck; a rude song, with extemporary words, being chanted the while.

"Vultures hovered overhead in anxious expectation of a feast; and Moseleli, who received us civilly and shook hands with us, sat in his leopard-skin caross upon a dead quagga, receiving the congratulations of his courtiers, for this flesh is a very favorite food with them. His appearance was mild, but undignified. We were in great luck to witness this sight, since it had been a royal hunt, such as the Highlanders practised of yore for the amusement of their chieftains. A large extent of country is encircled by men on these occasions, who, narrowing to a centre, drive all the game enclosed within their ranks to the desired point. I counted twenty quaggas as they were being extracted from one pit, not more than ten feet square and six feet deep."

This is slaughter upon a large scale: yet the hunting of savages, however destructive, does not seem to diminish the game or scare it from its haunts, still less to extinguish races. The European frontier settler never destroys upon this scale. Yet the axe, the plough, and the rifle, drive away the herds of wild animals, or the race perishes when its retreat is cut off. Is it merely the more deadly arms which alarm as well as destroy? or is it that the principle of wildness cannot coëxist with that of civilization?

The following gives an idea of the sufferings of animals in that parched country from want of water; and of men too, if they do not adopt the precaution of carrying it with them.

"Eight hours' journeying through deep sand, on a dead level, knocked up the oxen, without our finding water: they refused to eat, and only tired themselves by wandering about; so we fastened them up to the wagons, and of necessity waited the night. On the next morning, crawling feebly along with the wearied teams, we came to some round deep holes, containing an immense quantity of mud, but very little water. These are situated in a grassy hollow encircled by bush and formed the site of a Bawangketsi village. • • •

"Numerous trees, cut down and hacked about, and some old pit-falls, were the only vestiges of the village except the wells.

"A trench was dug; the oxen and horses crowding about us from the smell of the water, which they were so 'erribly in want of, but could not reach; and, baling with some tin buckets, we gave each enough to keep them alive; driving them up two at a time. Their eyes had a glazed look from anguish; and it was distressing to ration the poor creatures, though at the same time wholly indispensable.

"Knowing that these wells must once have supplied water to numbers of men and cattle, we set all the Bechunas present to work with ropes, spades, and buckets, to clear out the mud, promising them a reward of beads; by which means an abundant supply of pure water, very slightly impregnated with sulphur, rose to a depth of four feet and upwards, a quantity more than adequate to satisfy all our wants."

#### THE WOUNDED BUFFALO.

"Frolic left us seated by the fire, and climbed the hill-side; whence he espied a small herd of buffaloes in the thorns below him, and, quickly descending, informed us of the fact. Under his guidance, we proceeded cautiously to leeward, and found about twenty buffaloes lazily eating towards the water: their bodies were plastered with the mud in which they had been rolling—some looking half-red, others yellow, and others gray, according to the different natures of the soil where their baths had been. We were within eighty yards, but having little shelter, were obliged to wait for better ground. At last we fired a volley from the dry banks of a periodical stream, and wounded our game; but they dived into some bushes, and, according to a maxim well known to sportsmen here, 'never follow a wounded buffalo,' we left them, and pursued the main body from which they had separated. There were no trees of any size which we could climb, excepting a few small *acacia* thorn trees, which tore our clothes in shreds. Balanced on the low boughs of one of these, I struck another bull; which ran towards the report, his ears outstretched, his eyes moving in all directions, and his nose carried in a right line with the head, evidently bent upon revenge: he passed within thirty yards of me, and was lost in the bush. Descending from my frail perch, Frolic again discovered this buffalo standing among some small thick bushes, which nearly hid him from view; his head was lowered, not a muscle of his body moved, and he was, without doubt, listening intently. We crept noiselessly to a bush, and, some twigs intervening between his shoulder and the line of aim, I fired through them, and again had the satisfaction of hearing the ball tell. The huge brute ran forwards up the wind, fortunately not in our direction, and stood still again. No good screen being near, and his nose facing our way, prudence bade us wait patiently for a change in the state of affairs. Presently he lay gently down; and, knowing that buffaloes are exceedingly cunning, and will adopt this plan merely to escape notice and entrap their persecutors, we drew near with great caution. I again fired through his shoulder; and, concluding from his not attempting to rise that he was helpless, we walked close up to him, and never can the scene which followed be erased from my memory. Turning his ponderous head round, his eye caught our figures: I fired the second barrel of my rifle behind his horns, but it did not reach the brain. His

wounds gave him some difficulty in getting up; which just afforded Monypenny and myself time to ensconce ourselves behind the slender shrubs that grew round the spot, while Frolic unwisely took to his heels. The buffalo saw him; and, uttering a continued unearthly noise, between a grunt and a bellow, advanced at a pace at which these unwieldy creatures are rarely seen to run, unless stirred by revenge.

"Crashing through the low bushes, as if they were stubble, he passed me, but charged quite over Monypenny's lurking-place; who aimed at him as he came on, and lodged the ball in the rocky mass of horn above his head. The buffalo was so near at the time of his firing, that the horns struck the gun-barrels at the next instant; but, whether the noise and smoke confused the animal, or he was partially stunned by the bullet, he missed my friend, and continued his pursuit of Frolic. It is impossible to describe what were our sensations at this time: though all the incidents here related occupied but a very little while, there was sufficient time to reflect on and realize the greatness of our danger.

"Frolic dodged the enraged and terrific-looking brute round the bushes; but through these slight obstacles he dashed with ease, and gained ground rapidly. Speechless we watched the chase; and in the awful moment, regardless of concealment, stood up, and saw the buffalo overtake his victim and knock him down. At this crisis, my friend fired his second barrel into the beast; which gave Frolic one or two blows with his fore-feet, and pushing his nose under endeavored to toss him: but the Hottentot, aware of this, lay with much presence of mind perfectly still.

"Monypenny now shouted to me, 'The buffalo is coming!' and, in darting round a bush, I stumbled on my rifle, cutting my knee very badly. This proved a false alarm, and directly after the buffalo fell dead by Frolic; who then rose and limped towards us. He was much hurt, and a powder-flask which lay in his game-bag was stamped flat. The buffalo was too weak to use his full strength upon him, having probably exhausted all his remaining energy in the chase; otherwise the Hottentot would undoubtedly have been killed; since a man is safer even under the paws of a wounded lion than under the head of an infuriated buffalo."

#### A HOTTENTOT FIGHT.

"A great uproar, at the time when the oxen were being secured to the wagons for their night's rest, drew us from the tent where we were seated; and there, to our surprise, we beheld a furious encounter between the two drivers, Piet and Lewis. There had long been a feeling of resentment and jealousy smouldering in their breasts, originating in Piet's being a sort of head-man, and receiving slightly higher wages. This being a fair illustration of the Hottentot combats which not unfrequently disgrace the streets of Graham's Town, may be worth describing. Grasping hold of each other's shoulders, they butted with their heads, endeavoring by superior quickness to bring the crown of the head against their antagonist's nose; kicking violently, yelling, separating for a few moments, and titillating each other's periorania with yoke-keys, sticks, or anything they could lay hands on, then closing with redoubled ferocity, as if death alone should part them.

"Their shirts fell from their persons in strips, and blood flowed copiously. At length Piet was stunned by a blow, and fell; when Lewis com-

menced an oration over him. All this occupied but a few minutes; and our efforts to stop the fight at once were ineffectual; for, exasperated by mutual reproaches, with passions that never knew restraint and had now full scope given them, they were as frantic as madmen, and, by every angry gesture and word, testified their unmitigated hatred of each other; their mouths foaming with rage. Piet, recovering from his stupor, rushed to the wagons, and, taking a loaded gun, was going to settle the question in a very summary way; upon which we wrested it from his hands and discharged it in the air: in the next place we lashed him and Lewis to the wagon-wheels till their senses returned, where for half-an-hour they fought with abusive words. Two days had barely elapsed before these men were seemingly as good friends as they ever were."

#### "THE NOBLE SAVAGE" AT HOME.

"The tent was soon crowded to suffocation, many creeping under the wagons to get a peep at us. They readily comprehended pictures, and talked vehemently about them, especially one of a Matabili warrior, in Major Harris' work: they were also very eager and clamorous to see the portrait of the redoubted Moselekatze, their dreaded foe. Many of this tyrant's warriors, knowing that death awaited them on their return from an unsuccessful engagement, have deserted their chief, and been enlisted into other tribes: one of these men now acted as our interpreter, speaking to us through Kiveit, who was conversant with the Matabili language. Sichele [the chief] overhauled all our guns, and, selecting Bain's monster of four to the pound, desired to purchase it. In vain was he told that the piece was on the percussion principle, while a flint gun of the rudest construction was the only kind he had ever before seen or used. He insisted on trying it; and the gun was purposely over-loaded, that he might relinquish his attempt to buy it. Sitting down, he took a deliberate shot at an ant-hill, and hit it; a token of skill which his tribe greeted with loud acclamation. His shoulder had received a severe blow; but, imputing this to the strength of the gun, he was the more eager to obtain it, and departed very sulky at its being denied him.

"Another royal visit—at the termination of which we were congratulating ourselves, when the whole seraglio, consisting of five queens, entered our tent, occupied every chair, and, with the most unbecoming effrontery, began begging. We made their highnesses many presents, and received in exchange from them some soiled bead bracelets. One of the queens, the favorite, and therefore the most incommoded with bangles, beads, and finery, was a Mantatee, and probably stolen property. Another of them was Sobiqua's the Bawangketi chief's queen, and was forcibly abstracted by Sichele while she was on a journey: she, however, looked very happy.

"Shirts, stockings, trousers, and coats, have been given to Sichele, to rid ourselves of his importunity; which he will wear merely from vanity, to his own great discomfort, and to the detraction of his really fine appearance in native costume.

"Bain and myself having been politely requested to visit his majesty in his royal residence, we proceeded thither, and found him seated on the ground in his cotla, or public court, with a queen reclining near him on an ox-hide. Aware that we were not accustomed to this mode of sitting, they with great courtesy handed to me an inverted bowl, and a wooden pillow to Bain.



Many wood-cuts are inserted in the page—portraits of game, with a few sketches of wild men; and if these are the work of Mr. Methuen, they show that he can handle the pencil as well as the pen, or better. The horns and heads of the animals are full of character: the two drunken Hottentots, at pp. 24—25, have life and action as well, especially the black bacchante with her pipe.

From the Britannia.

#### MONTE VIDEO AND BUENOS AYRES.

As an attempt is now in progress to navigate the River Parana, and to make a commercial settlement at Corrientes, we are induced to publish the subjoined narrative of a passage up the river, with a description of its shores. The writer had fair opportunities of observation. His letter will increase the surprise felt that the war should be suffered to linger on in such a miserable state. England ought certainly to interfere decisively, if she interferes at all, and either leave Buenos Ayres and Monte Video to settle their affairs as they please, or to assemble such a force as will make her mediation respected. At present we are only wasting the lives of our officers and men in a wretched squabble with a cruel barbarian. We commence the narrative with the writer's departure from Monte Video, where he is at present residing:—

MONTE VIDEO, May 14, 1846.

On the 4th of February we left Monte Video for Corrientes. The next day we passed Buenos Ayres; a very fine town, I should think from what could be seen of it. I counted no less, I think, than seven handsome church towers; and the houses, and general appearance of the country, showed that it well deserved its name.

On the 7th we passed Martin Garcia, and entered the Parana. The entrance is very narrow, water deep, current running down strong, and the banks low, marshy, and very luxuriant. This was the general appearance of the river up to Obligado, where the batteries were knocked on the head in November last, in spite of the *heroic* resistance of the Argentines (as the Buenos Ayrean newspapers say) against the combined *naval power* of England and France. Poor devils! they fought for their lives, for they knew full well that if they did not fight, their throats would be in certain jeopardy, as was proved by the cavalry cutting the throats of some two hundred who would not return to the batteries.

We arrived at Obligado on the 8th, and on the 11th reached the Basada of Santa Fé. The appearance of the banks of the river and the country in general improve very much indeed, after leaving Obligado. When I say the banks, I mean only the left bank, going up, because the river here widens so much and becomes studded with so many islands that it is impossible to see both sides at once. On the one hand you have fine bold heights, covered in some places, a short way inland, with luxuriant trees and flowers of every description; and on the other a low, marshy, luxuriant, little island, with trees so thick on it that you cannot see above a few feet inland. Thousands of birds, of various kinds, with a few country tigers, are seen in these islands. In going up the Basada you pass the enemy's batteries; when we went by he had only a battery of four guns (18-pounders, I think) at the Bocca de Tonelero, with which he

peppered us for half an hour, when we got out of range.

The next day we passed the small town of Rosario and the heights of San Lorenzo, where a large body of cavalry came down and fired at us with musketry—the passage of the river being so narrow here that you pass within musket-shot. We allowed them to come down, and then dispersed them with a few shell and congreve rockets, the latter knocking them over wholesale. Just before you arrive at the Basada, you pass the most beautiful spot in the whole river, (as far as Corrientes,) called the Tentagarda: the name, literally translated, I believe, means the “fat rich point.” I ought here to mention that the passage of the river from San Lorenzo leads you over by degrees to the right-hand bank, (going up,) which bank you keep up to Corrientes. The Tentagarda is therefore on the right bank, and a most rich, luxuriant spot it is—very high bold cliffs running out to an abrupt point, forming in its way out a ridge of hills covered literally with the most luxuriant dark green woods, while down the sides the bright colors of the beautiful wild flowers really presented a most enchanting contrast. This is but a poor description of this lovely spot; to feel all its magnificent natural beauties, you must be passing up the river some fine morning shortly after sunrise, or coming down at sunset, both of which have fallen to my happy lot. At the Basada you can just see the town of Santa Fé over the hills. The scenery is very pretty indeed, very rich, and, as usual, most luxuriant. We saw an immense flight of locusts about here: at first sight in the distance we took it for the smoke of some great fire, or of a steamer; the cloud was very thick, and stretched away for at least three miles. You have no idea of the myriads upon myriads of them. As we neared the cloud, we found an under flight of them only a few feet off the bank of the river, which was low here; these rose and joined the others, and really I could never have conceived that such an immense number existed. The sky was perfectly darkened for more than a mile high, a mile broad, and at least four miles in length. This is not the slightest exaggeration, I assure you; it was the opinion of all on board; indeed, some said seven miles long, but I have taken the smallest length for fear of going out of bounds.

Nothing of any note occurred on our passage further. The scenery in some places was really grand—cliffs of about one hundred feet high, covered as usual with most luxuriant woods and flowers. We did not see a soul, save three Guachos and a woman on horseback, (riding in the male fashion, which is the custom in this country for the women of the lower classes,) all the way from San Lorenzo to the village of Goya, where we arrived on the 17th of February. Here we saw a wretched village, some black people and some Guachos. The enemy's troops being in the neighborhood, we could not land. Before coming to Goya we saw several times immense troops of wild horses coming down to the edge of the cliffs to have a look at us, toiling and puffing away against a current of five miles an hour. We saw also thousands of wild fowl: the river abounds in wild fowl and fish; the land abounds in game of every description, from an ostrich to a cock-sparrow, or from a tiger to a water-rat.

On the 19th we were hard and fast on a sand-bank, a little below the small town of Bella Vista, in the Correntino territory, and about eighty miles



by water from Corrientes. We remained stuck in the mud here for three whole days and nights, and at last, happy hour! off the old ship came of her own accord, as if she despised all our puerile endeavors to move her, and intended to show us that she only moved when she pleased.

While we were on shore, the commandant of Bella Vista, a Senhor Salis, came on board to offer us any assistance in his power, which was very kind. He was a nice old fellow, but wanted shaving terribly, and his face looked (as well as the faces of all his companions) as if it had not made the acquaintance of soap and water for some time. But we overlooked all this in our admiration of the old fellow's kindness, who gave us the most pressing invitation to come and see him.

The despatches having been sent by one of our lieutenants overland to Corrientes to Captain Hotham, (who was living on shore there, waiting for us to come up for him,) we remained at anchor off Bella Vista till his return on the 22d. Every one went on shore on the 21st except myself, who, from indigestion, remained on board. Old Salis treated them very well, gave them horses and a good dinner, and ended by offering one of our fellows (who had captivated the old gentleman, I suppose) his daughter in marriage, with 5,000 head of cattle as a marriage portion. The offer was politely refused, the midshipman informing the old gentleman that his views did not tend towards the matrimonial state at that time. I had wished, if it were possible, to have gone up to Corrientes, but it was not to be managed. One who did so, however, told me a little about the country which he rode through. It is very woody and very luxuriant indeed, abounding in game, wild horses and cattle, and almost every minor species of animal that you can name. He saw no signs of cultivation whatever, though he passed some fine country houses. The war has put a stop to all agriculture for the present, the people having left the country and gone to reside in the towns or villages for safety. In one place he had to wade through a swamp for ten miles; one horse gave up and was left to die, the Guachos he had with him catching a fresh horse. Every ten miles or so the Guachos lassoed fresh horses, and on they went full gallop. He accomplished the 120 miles in fourteen hours, which was good riding for an Englishman. The Guachos ride 150 miles in twenty-four hours, and on extraordinary occasions, when great haste is required, they do 200. The horses were very inferior indeed, nothing to be compared to our own in point of speed, mettle, or strength, or beauty either.

On the evening of the 24th we anchored off a beautiful spot just at sunset. The fine, dark, bold cliffs, with the wild, uncultivated woods and flowers growing down over them to the water's edge, strongly reminded me of Mount Edgcomb.

The next day we arrived off Corrientes, which, from what we could see of it, seemed a pretty little place. The inhabitants turned out in great numbers to see us come in, and I hope they were gratified. The women came off to see the ship in great numbers after the second evening, and we showed them great attention, which pleased them much; so much so that every evening afterwards we were crowded with the ladies of Corrientes. We then used to take them on shore and go the rounds of their houses. They were very kind and hospitable to us. They are not pretty as a whole, though

their figures are very good. They wear no stays. Robertson, in his work on Paraguay, speaks very highly of the beauty of the ladies of Corrientes; but certainly I was greatly disappointed, and so was every one else. As to the town, I was very much disappointed in that also. If you can imagine some dozen streets of mud houses, with here and there a brick dwelling—some few streets of brick houses—three or four larger stone buildings, with only the ground floor, (all the houses are the same;) a large square with a cathedral in it, with the body of the church on one side and the tower on the other, (an odd way, by the bye, of building a cathedral,) a large stone building, the prison, on the third side, and a few mud huts enclosed in a cutthroat-looking, long dead wall, taking up the fourth—a few houses scattered just outside the town as a suburb, a number of beautiful trees on the right; roads that would break M'Adam's heart to look at, composed of sand, and huge wheel ruts rising in some places very suddenly, and in others equalling the Falls of Niagara, for the abruptness with which they depart from the level line—three or four glass lamps to each street, each lamp containing a solitary tallow candle—and a number of uncomfortable-looking green fields in the midst of the town;—imagine all these things, and you have Corrientes to a nicety.

I walked one day some seven miles out in the country; it was very flat and unprofitable—no scenery whatever. One thing I noticed: the women of the huts, and the men too, were far superior in personal beauty to the richer classes. I have since been told that it is the same here; the poorer people, men and women, being far better looking than the richer community. This is all I can say of Corrientes. The manners of the people are very free; it is the same at Monte Video and at Buenos Ayres.

I have been told one thing, relative to the river, I have not yet mentioned. From the immense quantity of sarsaparilla which grows on the banks, the waters below the Basada have become strongly impregnated, so much so that invalids in time of peace come up to drink the waters for the benefit of their health. This, I think, is a curious fact.

During our stay at Corrientes (of five days) several of the convoy arrived, but others yet remained some hundred miles down the river. I should imagine that this mercantile speculation will turn out a regular failure. There is little or no money in the country. The women do all the work that is required, both for themselves and the men; and the men are too lazy by far to care about business; besides, when people come to consider the difficulties attendant on a voyage up the Parana to Paraguay or Corrientes, viz., that the current is always against vessels going up at the rate of four miles an hour, the intricate passages up the river winding first one way and then another, so that the wind, which is fair at San Lorenzo, for instance, becomes dead *foul* two miles beyond it; the numerous sandbanks, which are continually shifting their positions, from the great strength of the current, thereby rendering what was a safe passage in January a mass of sand in May. And then comes the difficulty of disposing of cargoes. One vessel with a cargo of salt, when we were there, finding it was impossible to dispose of it, asked permission to throw it into the river, which was refused, and she at last got rid of it by presenting it to the government. Some of the vessels were at anchor for three weeks at a

time, waiting for a fair wind. When all this is considered, I think the attempt at trade will be given over. The difficulties could be overcome by steam-tugs; but where are the coals to come from? This is but a meagre description of the Parana and Corrientes, but it may serve to amuse you.

#### MONTE VIDEO, May 17.

The news from the Parana of late is bad. One or two occurrences have taken place since I was up there that are rather distressing, in more points than one. General Paz, whom you know had command of the combined Corrientino and Paraguayan army, has had some disagreement with the Corrientino government. Pending the dispute, he sent six hundred of his troops to support his party against that of the government, while the government party managed, without his knowledge, to get an equal number or so to desert him, and to come to Corrientes to help them, which they did. I cannot give you the particulars of the affair, as I have seen no papers of Buenos Ayres on the subject; at all events, affairs are in such confusion that Captain Hotham, the senior officer in the Parana, has gone up to Corrientes again, to see if he can manage affairs. It is very much to be hoped that he will succeed, for Paz is the only man out here fit to command an army. It is reported, likewise, that the Paraguayan government intends to withdraw its army, and to make peace with Rosas. I am afraid that that cut-throat villain will carry all before him yet, as far as armies and fighting on shore goes.

The next piece of intelligence that I shall give you is rather worse than the last. Lieutenant Charles Fegan, in command of the captured schooner *Obligado*, tender to the *Gorgon* was coming down the river from the Basada with despatches for the admiral at Monte Video, under orders from Captain Hotham to navigate only at night, until he had passed the batteries and considered himself out of danger. It is astonishing how very unfortunate some affairs turn out. He got safe down to the enemy's position at San Lorenzo by the morning of the 18th of April, intending to pass the batteries that night. When the night came on he got under way, and had just arrived opposite the extreme left of the enemy's position, when the vessel ran hard and fast on a sandbank. Here was a pleasant situation! Every endeavor was made that was possible to get the vessel off, but all to no purpose, and the daybreak of the 19th found her in this most unfortunate position. The enemy immediately brought a field-piece down, and commenced firing at her: the second shot told, going right through her, as did every succeeding one. Lieutenant Fegan, under these distressing circumstances, being perfectly unable to return the fire, and seeing the consequent destruction of the vessel and crew if he remained in her, decided upon deserting her, which he immediately did, taking with him the most important despatches. He escaped with the crew up the river again in an open boat. Nothing has since been heard of him: report says he was dangerously wounded, but nothing official is yet known. He left behind him in the *Obligado* several private letters, a letter on service, and the mail-bags of the *Gorgon* and *Firebrand*. The enemy have made a very loud crow about this affair; the *British Packet* has published some of the captured private letters, &c., &c. One cannot yet hazard an opinion on the conduct of Lieutenant Fegan, as only the enemy's

side of the question is known, which of course is not to be depended on.

I now come to the most distressing part of the Parana intelligence. Mr. William Wardlaw, mate of her majesty's brig *Racer*, has been most barbarously and inhumanly murdered while under the protection of a flag of truce, a protection that by every civilized government existing is always recognized. The particulars of the case are these:—Mr. Wardlaw was proceeding along the coast near a place called the Atalaya, not very distant from Buenos Ayres, (for the *Racer* is one of the blockading vessels,) in charge of the pinnace, on particular service, when the boat suddenly ran on a sandbank which ran out from the mainland. From going at a great speed the boat ran very far up on the bank, and being a heavy boat it was found impossible to move her. Several people in the mean time came down on the beach, and told Wardlaw (who spoke Spanish) that if he did not immediately get off they would fire at him. Wardlaw had a flag of truce up, and asked permission to come on shore, which they granted. He then took the flag of truce with him, went on shore, explained that he was on a peaceable mission, and got leave for half an hour to get his boat off. He then returned to the boat, and took the requisite means for getting her afloat. In the mean time the people had consulted together, and cried out to Wardlaw "that they wished to speak to him." The boat by this time being nearly afloat, and a large whaleboat of the enemy having been perceived pulling up as hard as they could towards the pinnace, the boat's crew all begged Mr. Wardlaw not to go; but Wardlaw was obstinate, and went, naturally enough confiding in the safety of the flag of truce which he took with him. He had hardly left the boat when she got clear of the sandbank. Wardlaw, however, continued his course to the shore. Immediately he set his foot among the people the boat's crew saw them forcibly take the flag of truce out of his hand, and break the staff in pieces. Poor Wardlaw at that moment turned round, and sung out to the boat's crew, "Give way on board for your lives, for I am lost!" The last they saw of him was that he was secured, and carried off as a prisoner. He was never seen again. During all this the whaleboat had got up within range of the pinnace; and the pinnace, now giving way as hard as they could to get safe on board, finding it impossible to get rid of the whaleboat, which was fast coming up with her, fired the boat's gun, containing two bags of musket balls, which killed eight men in the whaleboat. The boat, however, still continuing the chase, got another dose, which killed three or four more; and then she turned back for the shore.

Wardlaw had been taken up to a house, prisoner; and when the news came up that the whaleboat's attempt to capture the pinnace had been defeated, with the loss of ten or twelve men, they cut his throat then and there, without any trial or form of law whatsoever, which was directly contrary to the decree of Rosas, that ordained "that all British or French officers or men captured in his territory were to be tried as pirates."

Since the above distressing occurrence, that cut-throat villain, Rosas, has issued a second decree, justifying and ordering the people to treat all British or French officers, or men, taken prisoners in his territory, summarily, as pirates and robbers—not to try them in any way whatever, but to inflict any punishment or torture they please. In

plain words, to cut the throats of every officer or man who is unfortunate enough to become a prisoner. If after this decree any one is taken prisoner, depend upon it, whatever his rank may be, the decree will be acted on to the very letter. Rosas hopes by these means to force us to make peace; but it is to be hoped that poor Wardlaw's inhuman murder will only be the cause of more powerful means being sent out to coerce this brutal tyrant.

From the Britannia.

*The Druidical Temples of the County of Wilts.*  
By the Rev. E. DUKE, M. A. Smith, Compton street.

MR. DUKE undertakes to settle a question that has for ages perplexed the learned, and defied rational explanation. He conceives that he has found a key to the secret of those vast Druidical remains in Wiltshire, which undoubtedly symbolize the faith of the ancient inhabitants of this island, though no satisfactory solution of their mysteries has yet been discovered. It would require greater knowledge of the subject than we can pretend to, to pronounce a decided opinion on the merits of Mr. Duke's theory, but it certainly exhibits great sagacity, and is supported by a number of favorable circumstances.

The worship of the heavenly bodies appears natural to the mind of man. The sun first commands his homage, as the parent of the highest blessings he enjoys—life, light, warmth, and fertility. Worshipers of the sun have been found in all parts of the earth; in the extreme west and in the extreme east; in the kingdoms of Mexico and in Peru, as well as in the great empires of the old world. The other heavenly bodies have commanded their share of adoration; and, as their revolving motion was watched by the speculative eyes of those thoughtful men who were set apart as the interpreters of mysteries beyond the apprehension of sense, a conviction was attained that the sun, the moon, the planets, and the earth formed one vast universe, having some mutual connection and mutual influence. The wanderers of the desert, the navigators of the ocean, and the shepherds of the plains, beholding the unclouded heavens spread above them like a magnificent chart, traced by the hand of Deity, must have felt, from the first dawn of thought in their minds, some of those vague dreamings so finely expressed in the verse of Byron:—

"Ye stars, which are the poetry of heaven,  
If in your bright leaves we would read the fate  
Of men and empires, 't is to be forgiven  
That, in our aspirations to be great,  
Our destinies o'erleap their mortal state,  
And claim a kindred with you: for ye are  
A beauty and a mystery, and create  
In us such love and reverence from afar,  
That fortune, fame, power, life, have called themselves a star."

We have express testimony that the Druids cultivated the knowledge of astronomy with great zeal. The sentence in *Cæsar's Commentaries* is decisive on that point:—"Multa præterea de sideribus, atque eorum motu, de mundi ac terrarum magnitudine de rerum naturâ, de deorum immortalium vi ac potestate disputant, et juvenuti tradant."

Mr. Duke quotes Pomponius Mela to the same effect:—"Habent tamen et sacundiam suam magistroque sapientiæ Druidas. Hi terræ mundique magnitudinem et formam motus celi ac siderum ac quid Dei velint scire profitentur."

It was natural that as the worship of the heavenly bodies became established as a form of belief, and as their motions became better known, an attempt should be made by vast monuments to rear and perpetuate an image of the planetary system on the earth. This Mr. Duke conceives was the object of all the Druidical temples in Wiltshire. He imagines that they were constructed to present a likeness of the sun, the moon, and the planets in their courses, and of the earth as the centre of the system. Each luminary had its temple for worship, Silbury-hill being the representative of the earth.

This is the leading idea of Mr. Duke's work. The conception is in itself grand, and fills the mind with fine sentiments concerning the earliest inhabitants of this island. It is in the highest degree irrational to suppose that those immense structures, the remains of which yet move our wonder, were planned without an object. The supposition is one of those that negatives itself. Great labors wrought by the free will of a whole people must have in them some idea to stimulate their enthusiasm, and excite them to continuous exertion. And nothing can be conceived more capable of rousing and maintaining their energy than the thought that they were establishing a visible and mighty representation of the system of the universe, and were erecting "houses of heaven" on the earth, for the worship of the powers of the sky.

Mr. Duke, early in his volume, clearly reveals his ingenious and original

THEORY OF THE DRUIDICAL TEMPLES.

"My hypothesis then is as follows—that our ingenious ancestors portrayed on the Wiltshire Downs a planetarium of stationary orrery, if this anachronism may be allowed me, located on a meridional line, extending north and south the length of sixteen miles; that the planetary temples thus located, seven in number, will, if put into motion, be supposed to revolve around Silbury-hill as the centre of this grand astronomical scheme; that thus Saturn, the extreme planet to the south, would in his orbit describe a circle with a diameter of thirty-two miles; that four of these planetary temples were constructed of stone, those of Venus, the Sun, the Moon, and Saturn; and the remaining three of earth, those of Mercury, Mars, and Jupiter, resembling the 'hill altars' of Holy Scripture; that the Moon is represented as the satellite of the Sun, and, passing round him in an epicycle, is thus supposed to make her monthly revolution, while the Sun himself pursues his annual course in the first and nearest concentric orbit, and is thus successively surrounded by those also of the planets Venus, Mercury, Mars, Jupiter, and Saturn; that these planetary temples were all located at due distances from each other; that the relative proportions of those distances correspond with those of the present received system; and that, in three instances, the sites of these temples bear in their names at this day plain and indubitable record of their primitive dedication. Now, further, as to the four temples constructed of stone, I shall be able to show that they consisted of a certain definite number of stones, and by an analysis of their details I shall show that these details are resolvable into every known astronomical cycle of antiquity, whilst the other appendages attached to, but not forming component parts of, three of such temples, are resolvable only into numerical cycles; and that these planetary temples taken synthetically, and as a whole, were intended



to represent the *magnus annus*, the great year of Plato, the cycle of cycles, (well known before the days of Plato, but he, being esteemed the Solomon of his age, this most celebrated of all cycles took its name from him,) when the planets, some revolving faster, some slower in their several courses, would all simultaneously arrive at the several points from whence they originally started, and that then the old world would end, and a new world spring into being.

"Such was, in my humble opinion, the grand astronomical scheme that was originally portrayed on the face of this most interesting of all counties, the county of Wilts, to develop which at large is the task I have set myself, and now propose to enter on."

It is not within our scope to trace, step by step, the various proofs collected and urged by Mr. Duke, in support of his theory. Their value must be judged by an attentive examination of the locality; they seem to us reasonable, and are certainly worthy of attentive examination. His notice of the distances of the several temples is remarkable, as establishing a connection between

#### THE DRUIDICAL REMAINS AND THE PLANETARY SYSTEM.

"I now record the relative distances of the various temples, representing the orbs of the planets, from the earth as the centre of the universe. The temples of the sun and moon the temples of Mercury, Venus, Mars, Jupiter, and Saturn, are located respectively at the distances of 1, 3, 4, 6, 9, 16 miles from the earth. The diameter of their respective orbits (were the members of this vast planetarium not stationary, but capable of rotatory motion) would be, therefore, 2, 6, 8, 12, 18, 32 miles. The temples are all placed on a right line, due north and south. As, therefore, the orbit of Saturn in this magnificent planetarium will have a diameter of 32 miles, this is the length of that meridional line, on which the temples are located, the space within which this wonderful work of the hand of man has been performed."

Mr. Duke's belief in the theory he has propounded is absolute and complete. At the conclusion of his work he speaks with confidence of

#### THE PROOFS OF HIS SYSTEM.

"When I first undertook to develop this theory of the origin of Stonehenge, and the other ancient religious temples of Wilts, I saw those detached and existing facts throughout its scope which might justify its submission to public attention; but I was not aware of that very full and successive chain of evidences which has, as it were, been link by link drawn forth. I can truly say that in my progress new facts and arguments arose up in corroboration of its proof on every side, at the same time that no adverse or discouraging argument occurred to impart doubt as to its correctness. And now, having closed at length my attempted development of this wonderful and magnificent scheme, I must leave to the judgment of my readers and the literary world the decision it shall please them to make concerning the result of my labors: to them I leave it to determine whether any portion of the mists which have so long enshrouded these venerable monuments has been dispersed, and whether any light, more copious than hitherto, has been let in, to fall on the dim history of these primeval remains, and to bring forth to view, in our latter days, the objects with which they were originally raised,

and the scientific rules according to which they were constructed; and (to speak the whole at once) to them I leave it to determine whether or no they may be considered now to stand forth in revealed light as an astronomical planetarium—a stationary orrery—devised by the ancient astronomers of the land as a system of planetary worship; and to embody in stone a collection of cycles, from the cycle of the days of the week to that cycle of cycles—the cycle of the years of the world."

He seems both an observant and sagacious man. Yet it is to be noted that the fancy is never more active than when it is engaged in supplying evidences to support a favorite notion. At such times trifling circumstances are magnified into convincing proofs, and the most glaring discrepancies and opposing facts are passed over as beneath consideration. While one set of faculties is called into a state of unnatural excitement, another set is lulled into absolute repose. Something like that process takes place in the mind which we experience during sleep. Imagination runs riot while judgment is subdued. That this may, in some degree, be the case with Mr. Duke is probable. He may have colored some facts and distorted others to suit his views. Yet, on the whole, we view his theory of the Druidical remains as the only rational one ever published, and as having a very high degree of probability, both from its own nature, and from the broad features of the locality and temples it is intended to illustrate.

From the Spectator.

#### M'KENNEY'S MEMOIRS ON THE RED INDIANS AND INDIAN AFFAIRS.

UNDER the elder, and it would seem by all accounts the better age of the American government, the trade with the Indians was a state affair, in which private persons were not forbidden to engage, but in which they encountered numerous obstacles. The object of the government was doubtless political, and aimed at establishing relations with the different tribes, so as by the influence and power of a central authority to check border raids and Indian wars, as well as to arrange them when they did occur. The plan appears to have been carried out with a considerate liberality. The supply of goods at the different stations was large and well adapted to the Indian wants; no profit was sought for in the transaction, and the sale of spirits was strictly forbidden. This government trade appears to have been abolished lately by the rampant democracy, under the plea of monopoly; but in its vigor, Mr. M'Kenney was appointed superintendent, (in 1816,) and subsequently (in 1824) he rose to be chief of the Indian bureau. This post he held till 1830; when he was dismissed by General Jackson, on the new principle of making a clean sweep in the offices, by which he signalized his advent to the presidency. Mr. M'Kenney has since that time been lecturing on the origin and history of the Red Indians, (about which subjects nobody can know much,) and on the injustice with which they have ever been treated by the whites, especially since the accession of the extreme democratical party to power under Jackson.

The second part of the two-volumed book before us contains a report of these lectures: the first part consists of Mr. M'Kenney's official experiences; and, done upon an unselected chronological basis, it is rather of a miscellaneous cast: the ac-

thor's appointments—the state in which he found affairs in the office—his own good management—his different journeyings and adventures among the Indians—stories of his own treatment by the Jackson government, accompanied by an exposé of various jobs, and an account of the frauds by which, and the cruelties with which, the Indians were expelled from their lands, by the general government, yielding to the influences of the States.

Strange as it may seem, one of the last things acquired by the mind is the power of generalizing details into a whole, seeing things as they really are, and so describing them—using words as a medium to accurately reflect ideas, but holding them as nothing in themselves. The power of generalization belongs to education: the vulgar rarely have it—as any one may ascertain by listening to the endless and useless details of their stories. The other faculty of seeing things as they are, and naturally describing them, is connected with the power of generalization, but is rarer. It is in fact the last acquirement of the classic in literature and the gentleman in life, and is never attained in either without much practice or experience. So far as we have had means of judging, the native American mind has not yet reached this stage of cultivation. Among the best of the home-bred there is something unreal; a want of completeness and character in the ideas, and a verbosity or turgidity of style, which in the mass degenerates into a weak dilution of details and a straining pomp of words. From these defects Mr. M'Kenney is not altogether free; but he has less of the pomp than of the details, save where he thinks it necessary to be *fine*. Considered as a memoir, a political exposé, or a series of sketches and adventures, the book is of slender value in a literary sense; but it is not useless. It draws, not very fully but clearly enough as far as it goes, a contrast between the old American system and the new, very much in favor of the former: it certainly exhibits, and with the particularity of an eye-witness, several shameful jobs amongst the patriots of Washington, exceedingly after the fashion of Warren Hastings: it also displays the unprincipled conduct of the government towards the Red Indians, though this was perhaps enforced upon them by State influence rather than the Federal wish: and there are many anecdotes and stories of the Red Indians, that have interest if not novelty. The lectures are much inferior to the memoirs. Their chief interest, indeed, arises from their scattered anecdotes, and their proposal to preserve the lives and lands of the tribes now forcibly removed and settled west of the Mississippi, by erecting their district into a territory, with power to become a State on the same terms as other States.

As the two volumes are bound in one, we shall not mark the works whence the extracts are taken; but they will chiefly come from the memoirs. Here is a story of the effect of a burning-glass upon the Red Indians; to which the Honorable Charles Murray is probably indebted for a similar scene in his *Prairie Bird*—though the fact is better managed in the reality than in the fiction.

"An old Indian seated near me took out of his pouch a bit of punk, and flint and steel, and began to strike a fire to light his pipe. I directed the interpreter to tell him he need not be at that trouble—that I would bring down fire from the sun, and light his pipe with that. He looked at me a while, and shook his head, as much as to say, 'Nonsense!' I rose and went to him, drawing

from my pocket a sun-glass, and carefully concealing it from his view, drew through it the focal rays, and told him to smoke. He did so; when the tobacco being ignited, and the smoke from it filling his mouth, he first looked at me, then at the sun, then at his pipe, with eyes that danced in their sockets with amazement and awe."

We have met the earlier part of this anecdote of the celebrated Randolph of Virginia before; but the latter part is new, and a singular example of the influence of honors upon republicanism.

"I was present in the hall of the House of Representatives at Washington during an exciting debate, on the one side of which was Mr. Randolph, and on the other Mr. Jackson of Virginia. Mr. Randolph had spoken, when Mr. Jackson rose in reply. He had not proceeded far, when, having occasion to refer to some part of Mr. Randolph's speech, he addressed him as 'my friend from Virginia.' He had scarcely given utterance to the word 'friend,' when Mr. Randolph sprang to his feet, and, throwing his lustrous eyes first on Mr. Jackson and then on the Speaker, keeping his arm extended meantime, and his long, bony finger pointing at Mr. Jackson, said, in that peculiar voice of his—'Mr. Speaker, I am not that gentleman's friend, sir; I have never been his friend, sir; nor do I ever mean to be his friend, sir!'—when he took his seat.

"Mr. Jackson, meantime, keeping his position on the floor, looking first upon Mr. Randolph and then at the Speaker, replied—'Mr. Speaker, I am at a loss to know by what title to address the honorable member from Virginia;' then pausing awhile, with his finger beside his nose, he said—'I have it, sir—I have it—it shall be'—looking Mr. Randolph full in the face—'the right honorable descendant of her Majesty Queen Pocahontas!'

"The entire countenance of Mr. Randolph changed instantly; and from a look of mingled aversion and contempt to a smile the most complaisant and gracious. The storm-cloud was dissipated, and the rainbow seemed to reflect all its hues upon his countenance, in one glow of heart-felt reconciliation; when he bowed most courteously, giving evidence, that of all the honors he had ever coveted, that of having descended from that Heaven-inspired woman was the one he most highly prized."

Mr. M'Kenney was not dismissed from the Indian bureau at once, on account of the remonstrances of the secretary of war, who could not do without him; but he was in constant danger. The following scene of place-hunting at the capitol occurred soon after he had been to the President to free himself from some ridiculous party charges; and General Jackson had expressed himself satisfied. The "Kickapoo Ambassador" was a sobriquet given to our author by General Duff Green of the *Telegraph*.

"The next morning, I believe it was, or, if not the next, some morning not far off, a Mr. R—s—n, a very worthy gentlemanly fellow, and well known to me, came into my office. 'You are busy, colonel!' he said, as he entered. 'No, sir, not very,' I replied; 'come in; I have learned to write and to talk too at the same time. Come in; sit down; I am glad to see you.' Looking round the office, the entire walls of which I had covered with portraits of Indians, he asked, pointing to the one that hung over my desk, 'Who is that?' 'Red Jacket,' I answered. 'And that?' 'Shin-guab-

O'Wassin,' I replied. And so he continued, till, pausing a moment, he asked, 'And which is the Kickapoo Ambassador?' 'Oh, sir,' I answered, rising, 'he has the honor of standing before you in *propria persona*.' 'Come, come, Mac,' said he, a little put out; 'and have you really no Indian here called the Kickapoo Ambassador?' 'None, I assure you, except myself; and that is the title by which I have been honored, and which, believe me, I cherish with becoming pride and a corresponding pleasure.' 'Excuse me, colonel; I really was honest in supposing that a chief was among your collection of paintings, so called.' He then asked, 'Who wrote the treaties with the Indians, and gave instructions to commissions, and in general carried on the correspondence of the office?' 'These are within the circle of my duties, the whole being under a general supervision of the secretary of war,' I answered. 'Well, then, after a pause, he said, 'the office will not suit me.' 'What office?' I asked. 'This,' he replied: 'General Jackson told me, this morning, it was at my service; but, before seeing the secretary of war, I thought I would come and have a little chat with you first.'

"I rose from my chair, saying, 'Take it, my dear sir, take it. The sword of Damocles has been hanging over my head long enough.' 'No,' said he, 'it is not the sort of place for me. I prefer an auditor's office, where forms are established.'"

These confessions of a rain-maker, whom Mr. McKenney bribed to unfold his secret, indicate a readiness that a European mountebank might envy: had he really possessed a meteor stone, he might have been thought a dupe to his art.

"He stood up again, and looked, and listened; and then seating himself, began. 'Long time ago, I was lying in the shade of a tree, on the side of a valley. There had been no rain for a long time; the tongues of the horses, and cattle, and dogs, all being out of their mouths, and they panted for some water. I was thirsty; everybody was dry. The leaves were all parched up, and the sun was hot. I was sorry; when, looking up, the Great Spirit snapped his eyes, and fire flew out of them in streams all over the heavens. He spoke, and the earth shook. Just as the fire streamed from the eyes of the Great Spirit, I saw a pine-tree, that stood on the other side of the valley, torn all to pieces by the fire. The bark and limbs flew all round, when all was still. Then the Great Spirit spoke to me, and said, Go to that pine-tree, and dig down to the root where the earth is stirred up, and you will find what split the tree. Take it, wrap it carefully up, and wear it next your body; and when the earth shall become dry again, and the horses and cattle suffer for water, go out on some hill-top, and ask me, and I will make it rain. I have obeyed the Great Spirit; and ever since, when I ask him, he makes it rain.'

"I asked to see this thunderbolt that had shivered the pine-tree. He rose upon his feet again, and, looking well around him, sat down, and drawing from his bosom a roll which was fastened round his neck by a bit of deer-skin, began to unwrap the folds. These were of every sort of thing; a piece of old blanket, then one of calico, another of cotton; laying each piece as he removed it carefully on his knee. At last, and after taking off as many folds as were once employed to encase an Egyptian mummy, he came to one that was made of deer-skin, which, being unwound, he took

out the thunderbolt, and holding it with great care between his finger and thumb, said, 'This is it!' I took it, and examined it with an expression of great interest, telling him it certainly was a wonderful revelation and a great sight; then handing it back to him, he carefully wrapped it up again with the same wrappers, and put it back in his bosom.

"The reader is no doubt curious to know what this talismanic charm, this thunderbolt, was. Well, it was nothing more nor less than that part of a glass stopper that fills the mouth of a decanter, the upper or flat part having been broken off."

From the Britannia.

#### THE KAFIR WAR.

HOSTILITIES continue with undiminished activity, and the Kafirs have shown themselves unusually daring in an attack on Fort Peddie. They assembled in battle array to the number of 5,000, or as some say, 10,000 fighting men. They were repulsed with considerable loss, but not before they had captured all the cattle of the Fingoes. A Wesleyan preacher, the Rev. F. Green, describes the fray with much animation. A skirmish took place with the advance of the Kafir army preparatory to their grand attack:—

"Tuesday, May 27.

"A Fingo brings information that a large body of the Kafirs are approaching from the neighborhood of Stock's country. An English lad soon confirms this. Dragoons sent out, under Sir H. Drell, to attack them, also a six-pounder. Shepstone soon returns with information that the Kafirs are coming on from all sides in great force. A body of infantry despatched to support Sir Harry. Continued firing heard. The gun sent back, one of the horses having been shot dead; the horse was a wheeler. Troop Sergeant-Major Moffat, 7th Dragoon Guards, shot in the arm. Three-pounder sent to the assistance of the men. A little before sunset all returned. There was no other casualty on our side. The Kafirs had fought with great bravery, and some had even come so near the gun as to give the officer in command an opportunity of giving them two rounds of canister shot, which levelled not a few of them. At last the dragoons had also an opportunity of charging, as the Kafirs had come out upon the flat, and this appears to have been the close of the battle. They fled before the dragoons, but many of them were cut up. One got about ten inches of Sir Harry's sword; it was bent in extracting it from the body of the Kafir; Mr. Gore's sword was broken over the head of another; most of the dragoons' swords gave proof that they had been in contact with the Kafirs. It is said that 100 were killed. A party of Fingoes were engaged also. We now expected that a general attack would be made that night on the post. The night, however, passed away quietly. All hands, as well as the females, sleep in some defensible place. Some Kafirs from the main body came down in the dusk of the evening below the post, and fired several Fingo huts. A few rockets were fired at them by Lieutenant King with great skill, and it is supposed with good effect."

On the following Thursday the Kafirs assembled in great force, and were very daring and insolent in their demeanor. Preparations were made for their attack, by placing women and children inside the fort. The enemy assembled to the number of 6,000 or 7,000 strong, and made a magnificent



array. The attack took place shortly before noon:—

"I am afraid I can give you no description of the attack itself. Were it not that life and death were concerned in it, I should have pronounced it a most beautiful sight. As I did not go into any of the buildings till all was over, I saw the whole of it, but no doubt many circumstances will escape my memory. The Kafir commanders sent their aides-de-camp from one party to another, just as you would see it done on a field day with European troops. The main bodies were being continually increased by both horse and footmen, and soon after eleven the array was truly terrific. The largest body of all was said to be to the westward, and probably consisted of Umhala's and Rili's Kafirs. As they saw their scheme of drawing out the troops did not succeed, small parties of them began to advance in beautiful skirmishing order, and then the two divisions of Pato and the Gaikas moved towards each other, advancing at the same time as if intending a combined attack on some given point. The artillery was in readiness to give them a salute the moment they should come within range. The gun was pointed towards Pato's people, but a body of the Gaikas coming within range a little sooner than the others, a shot was sent into the midst of them. It seemed that several were knocked over by this shot, but that was of little consequence in comparison to what followed. This single shot appears to have disconcerted their plan, and they appeared to be thrown into confusion. Rapid discharges of shot and shell followed. The Kafirs had now extended themselves all round, and there was a continuous line at least six miles in length. Think of these advancing at the same moment, and so filling the valley that it appeared one mass of moving Kafirs. Rockets and shells were fired as rapidly as possible, and presently a tremendous fire of musketry from the Kafirs was poured, not upon us, but over us, the balls whistling over our heads. They did not, however, come near enough for the infantry to play upon them, and they consequently fired but few shots, excepting from the infantry barracks. A body of them got to Webb's store, and rifled it, as well as Abernethy's, but, a few large shells being thrown among them from the short howitzer, they speedily fled. We saw them running with their booty, blankets, &c., and a rocket was sent after them, which caused them to drop what they had and run. Webb's slaughter sheep were near the flagstaff, and one fellow rode up and was driving them off, when a few shots from the fort caused him to fall from his horse. He was, however, only wounded, and managed to get away, leaving the sheep. I expected they were coming in full force on the fort itself, and was not a little surprised to find that they kept clear of that, as they had boasted that they would trample this place to dust. They got away with most of the cattle, however, (about 4,000 head.) They would have taken the whole but for the determined bravery of the Fingoes. They retook a considerable number. The actual fighting, you will observe, was with the Fingoes, as every soldier was inside either the fort or the barrack. Indeed, they could not have gone without exposing the fort to danger, that is, presuming, as we certainly did, that they would attack it; and, if they had moved to any point, there were masses to pour in upon us from all quarters. The dragoons were sent out rather late, and could not overtake any. A party of Pato's

men still remained on the hill, (Graham's-town-road,) and Sir H. Darrell galloped after them, but they fled at his approach. The brave Fingoes continued the fight until late, and pursued the Kafirs almost as far as the Gwanga. Twelve Fingoes were killed, including a woman and child; and sixty-two Kafirs were killed by them, independently of those killed by the troops. Several were killed by the rockets and shells.

"The Kafirs are still about in numbers, and we are expecting a night attack. They have got the cattle, and may now come and set fire to the thatched buildings, if they can take us by surprise."

Another letter bears similar testimony to the strength of the Kafir force:—

"Various estimates are given of the force which attacked this post, ranging from 5,000 to 10,000. I think 5,000 too low an estimate. I never saw anything more magnificent than their appearance, and there were certainly enough of them to have eaten (literally) Fort Peddie and all it contained, and yet all the mischief they did was taking away the Fingoes' cattle. Sixty-two Kafirs were killed by the Fingoes, who lost twelve men. I think Divine Providence, and not man, saved us in this affair. Such an assemblage of Kafirs was never made with the mere object of getting cattle away. They no doubt intended to take the fort by main force, and destroy it and all it contained; and, if their courage had been equal to their vaunts, nothing could have withstood them."

The colonists considered the repulse of the Kafirs, notwithstanding the loss of the cattle, as a victory, and people of all ranks were hastening towards the frontier, to take part in the war and drive the Kafirs back.

From Sacred and Miscellaneous Poems; by W. B. Tappan.

## MY MOTHER.

THIS Book, my Mother! was designed for thee;—  
Of fair exterior; type, distinct and free;  
That, gratefully, thine aged eyes might dwell  
On themes that pleased thy absent child so well.  
Time, in his flight, beholds my labor done,  
And *thine*, too, ended—thy glad rest begun.  
Another volume is to thee unrolled;  
By angel hands is oped the page of gold  
Whose characters are stars of living light,  
Which thou wilt read with ever new delight;  
For never tires the poetry above,  
Whose theme, exhaustless, is Exhaustless Love.  
I've lost a want when asking at the throne;  
Blest are the wants that daily God supplies  
When from the heart petitions daily rise!—  
In all my suit thy constant name was known,  
With some fond thought, that virtue, pure as thine,  
Had power with Him for follies great as mine;  
If wrong, forgive me, Heaven!—I've lost thy  
prayers:  
In all my joys and ever present cares  
The dear belief still gave my heart repose  
That for its peace thy supplications rose.  
Such prayers are treasures of a mother's love,  
Enjoyed on earth, yet safely stored above;  
And, like her influence, silent, deep and wide,  
Still flowing onward in perpetual tide.  
To such rich streams are not the children heirs,  
When parents pass to where the Fountain flows!  
From such bequests, laid up for me in Heaven,  
Shall not, oh mother, yet supplies be given!

1846.

## LEGALIZING THE SLAVE TRADE.

[The following article is copied into the Living Age from the New York Albion, (a most intelligent paper, conducted by an Englishman,) as proof of the change of policy, of which we have before noted signs, in England. It is true that the writer of the communication professes to be a descendant of the New England pilgrims—but that is consistent with the supposition that he himself may be an Englishman.]

Whatever England may do in this matter, it is very certain that the United States will never allow our citizens to engage again in the importation of slaves. And we recommend the consideration of this consolation, the certainty of which is one of the *incalculable* advantages of the Union, to the zealous opponents of slavery, who are so impatient as to be willing to *deprive the northern states* of all influence on this subject by dissolving this Union.

We would propose to the British philanthropists, who have endeavored to involve *all* Americans in the odium of slave-holding, this compromise: that they shall not legalize the importation of slaves from Africa, until they shall first have bought all of ours. Perhaps Delaware, Maryland, Virginia, Kentucky and Missouri might *now* be willing to abolish slavery, if a moderate compensation could be made to the owners. On our part we might agree not to re-print the British articles against slavery, until we were entirely free from it.

But seriously—nay, sadly—would it not do for the English colonists to be permitted to buy slaves from the United States, with *their own consent*, on condition that the slaves have one day in the week as their own, with such securities that they might, by and bye, purchase another day—and so gradually free themselves? All their children hereafter born to be free at twenty-one, and with efficient guards against ill treatment; which would indeed be less likely to occur in the midst of the present free black population of the West Indies.]

WE have given insertion to a letter from a correspondent, who is, in plain terms, an advocate for legalizing the slave trade, *first*, because it is found impossible to suppress it; secondly, because, in attempting to suppress it, the misery of the negroes during the passage, is immeasurably increased; and thirdly, because if suppressed altogether, and if slaves cannot be sold, the African princes would probably return to their former practices of killing or devouring all the prisoners taken in war.

We beg to let our correspondent's arguments fight their own battle, merely observing, that we agree with him in thinking it impossible to suppress the slave trade, unless all the civilized powers of the world combine for the purpose. Mr. Wilberforce was nearly convinced of the same fact. The reference made by the writer to the articles in the London Times and Globe is significant, as these journals avow ultra free-trade principles. We have thought we perceived, for some time past, the forming of a party favorable to putting slave trade on some legalized footing, and we shall not be surprised to see it, ere long, boldly avowed. In fact, Lord John Russell's sugar bill for admitting the sugars of Cuba and Brazil, is a direct encouragement of slavery and the slave trade; and it has been asked in seriousness, if it be Lord John's object to have a cheap and abundant supply of sugar, why he does not withdraw the British squadron from the coast of Africa, and allow the free exit of negroes, in order that labor, and consequently sugar, may be obtained at the lowest mercantile figure!

No one now, we suppose, believes in the possibility of free labor successfully competing with slave labor in the article of sugar. Then for what has England sacrificed her once magnificent West India colonies?

## THE SLAVE TRADE.

To the Editor of the Albion.

SIR—I do not know if it will suit your rules or your space, to bring before the British and American public the subject of slavery; and especially the capital articles in the London Globe and Times, showing the utter uselessness of all the efforts made by civilized nations, at an immense expense of life and treasure, to suppress the African slave trade. So few persons in the United States see those papers that, perhaps, more interesting articles could not be laid before them. The conclusion to be deduced from the facts laid down in these and other documents placed before the British public, is, that the African slave trade cannot be abolished so long as the profit is more than commensurate to the risk.

I shall avail of the circulation of your paper on both sides of the Atlantic, if agreeable to you, to put forward a very startling proposition—the legalization and regulation of the slave trade by the united civilized nations: in other words, the merciful management of an evil impossible to be suppressed. I need not call to your recollection the vain attempts in France and other countries, to suppress gambling and other vices which human nature will indulge in at any cost and risk; and that after all trials it became apparent, that certain human passions may be regulated to the general safety of society, and a modified enjoyment to the individual. This medium course is, doubtless, all things considered, the part of wisdom; and I see no reason why it may not be properly applied to the slave trade. The horrors of this trade, as so feelingly illustrated by Wilberforce and others, and which, in due time, caused a sympathetic feeling and consequent action throughout the civilized world, were threefold. The intertribal wars in Africa for the purpose of obtaining prisoners to be sold as slaves; the horrors of the transatlantic passage; and the use of the whip in the colony whither the slaves were transported. The first and last of these, however, were less relied upon as facts by the ultra advocates of abolition, because it had been in a degree proved that wars had *always* existed among the African tribes, and did so exist without the range of possible influence of the foreign slave trade. Nay, it was said that this very trade arose from a prevalent custom of sacrificing, and frequently eating the prisoners taken in war; a custom which, to a considerable extent, became abolished when prisoners could be sold instead of eaten. The use of the whip and other ill-treatment in the several transmarine colonies to which slaves were conveyed, seems never to have been proved to have been universal, though atrocious instances from time to time were brought to light; but whether these were strong cases sought for and made the most of by the anti-servile philanthropists of the day, or were but the few out of the mass, the unceasing routine of oppression and injury, will, perhaps, never distinctly appear. It was admitted that many colonists, as a whole, kindly treated their slaves, whose chief objection was that they were compelled to labor steadily; a strong contrast to the easy, idle, wandering kind of life they had led in Africa.

But the greatest stress was laid upon the sufferings of the negroes on board the slave ships, and it may be safely affirmed that these were not much exaggerated. Hence anti-servile philanthropy kept before the world continually the horrors of these voyages. But it has been clearly shown that these horrors have not been diminished, if they have not been largely increased, since the universal expression of indignation and sympathy compelled Great Britain to, herself, attempt to enforce, and to induce others to aid, the total abolition of the slave trade. Smaller, sharper, and faster sailing vessels have been employed, more negroes put on board, and not a few thrown overboard when the slaver has been pursued by a man-of-war. And this increased suffering does not apply to a diminished but a doubly or trebly increased aggregate export since the commencement of the present century. But supposing all these vast efforts, expense, and loss of life on the part of civilized nations, proved effectual? The horrors of a transatlantic voyage would, indeed, be put an end to; but how would stand the relations of the African nations with each other? Would they return to the sacrifice of prisoners and the condition of anthropophagi?

And what would be the condition of the colonies which have continued to receive a supply of servile labor? Of course there would be an advance in the value of such labor and the price of slaves; but, would these people be more valued and better treated? Or would a yet greater amount of labor be required at their hands, and their condition the reverse of improved? In view, therefore, of the various conflicting views in relation to this subject, I am led to suggest the bold scheme of legalizing the African slave trade; but under such safeguards and regulations as shall make it rather a passenger, than a slave business. My first step would be to regulate the number of negroes to each ton of shipping, as also the quantity of water, provisions, &c., and that any deviation therefrom should work the forfeiture of the vessel or severe punishment of the crew.

It is probable, that when it came to be known on the African coast, that negroes, instead of being cooped up in bulk, a mass of seething human flesh, were comfortably transported abroad, there would be but a small disinclination on the part of prisoners, who might otherwise be burned alive or eaten, voluntarily to expatriate themselves as slaves. At all events, as the attempt to prevent the forcible export has failed, this plan is worth the trial.

It may be, and would undoubtedly be difficult in the countries whither the negroes would be carried, to provide for any system of proper and kind treatment. A guaranty of the respective governments of those countries, in consideration of the permission (under due regulations) to import them, that they should be well treated, might be useful to a certain extent, but after all, cannot have a very extensive effect among thousands of widely-scattered slaveholders. We cannot, however, provide for every portion of an evil: if we can somewhat improve its present condition, by introducing a wiser principle of action, so much has been gained.

The person who has thus boldly, perhaps rashly, suggested this plan for your columns, is no southern slaveholder, but a descendant of one of the pilgrims of New England, who, with numerous virtues, had some narrow views, the errors of which we of the present day perceive. Of an equally confined character appears the determination to exter-

minate the incurable evil of slavery rather than to regulate it—and to this also it is desirable that unprejudiced wisdom direct her attention. W.

New York, September 15, 1846.

## COMMERCIAL MOVEMENTS IN THE FAR EAST.

THE leisure now offered to the public mind cannot be better employed than in reverting to the many topics of great intrinsic interest which have been partially overlooked of late during the excitement of a singularly memorable session of parliament. In this category we place the state and prospects of our commercial relations in all the teeming seas eastward of the Malay peninsula. The vast regions in and around them, the shores of which are but scantily known to us, whilst their interiors are yet unexplored by Europeans, present a boundless field for the peaceful and beneficent conquests of trade; and towards these some initiatory steps have been taken and secured, while others, we believe, are in immediate contemplation. China, it is true, has not yet fulfilled the sanguine expectations of our merchants and manufacturers; it has not proved to be a commercial *El Dorado*: but, on the other hand, we have no reason to regard our prospects there with despondency. Time will be necessary to familiarize the inhabitants with our productions, and to remove the complicated impediments which local or general causes still cast in the way of our traffic. Meanwhile, we are in a position to avail ourselves of whatever favorable circumstances may arise, to watch narrowly over our own interests, and keep up a prompt and continuous action on their behalf. And even should the terms of our treaty with China continue, as now, to be evaded, either through the bad faith of the imperial government or its inability to control its disorderly subjects, we shall not be left without an indemnity. Chusan, which was to have been surrendered in December last, still remains in our possession; and it is not likely that we shall part with it so long as the nominal opening of the five ports is but a disguise for a continued system of exclusion.

The recent establishment of a British settlement on the little island of Labuan is an event of great importance to navigation. Abounding in coal, and affording a safe and convenient anchorage midway between Hong-kong and Singapore, it will yield inestimable advantages to our shipping in those seas; and it will especially facilitate our intercourse with the magnificent island of Kalamantan, (improperly called Borneo,) which has been recently laid open to us by the surprising fortunes of our good and gallant countryman, James Brooke, now hereditary rajah of Sarawak. The next mail will probably bring us interesting intelligence from that quarter. Admiral Sir Thomas Cochrane had sailed from Singapore, at the date of the last despatches, with a large force to chastise the piratical Sultan of Bruni, and to crush the Malay rovers, who, forgetting the lessons inflicted on them two years ago, have lately resumed their murderous courses with extraordinary audacity.

Measures are in progress for the establishment of a steam navigation from Singapore to Sydney. This would be connected on the one hand with the line from England via Ceylon, and on the other it would link together in one continuous chain all the British ports and settlements from Chusan to New Zealand.

While we are thus actively engaged in extending our commercial resources, we are also deriving ben-



efit from the more liberal policy which our own example has commended to the adoption of our neighbors in those regions. Struck by the rapidly growing prosperity of our free port of Singapore, the Dutch have begun to abandon their jealous system of exclusion. They have already declared Sambas and Pontiana, on the island of Kalamantan, and Rhio, on Battam, to be free ports; and it is rumored, that they are about forthwith to remove the interdict against foreign vessels touching at the Moluccas. These are good auguries, and encourage us to look for the spread of the same enlightened views in other quarters. If the Dutch have learned wisdom from experience, so too may the Japanese, their close allies, and hitherto their partners in error. A commercial mission from this country to the court of Japan begins to be talked of as not an improbable event; nor do we believe that the project, if strongly backed by the commercial classes, would meet with much objection on the part of the administration. Its final success would richly compensate us for the disappointments we have incurred in China; and that success would mainly depend on our own prudence in planning and carrying out the mission. The opportunity is peculiarly favorable: the Dutch would probably find that their interest lay rather in coöperating with us than in opposing our efforts; the Japanese people of every grade appear earnestly to desire the proposed change; whilst the government, which is by no means deficient in intelligence, in all likelihood pursues its old routine rather in obedience to its sense of decorum than to its abstract convictions, and would willingly accept a sufficient pretext for abandoning an irksome system, no longer justified by such circumstances as those under which it was established.—*Spectator*, 5 Sept.

From Chambers' Journal.

#### INDICATIONS OF VEGETABLE INSTINCT.\*

In a previous paper, we gave some account of those singular motions which have been noticed in the organs of certain plants, remarking that it is apparently a mistake to believe spontaneity of motion to be the peculiar attribute of animal organizations. Our attempt, in the present instance, will be to exhibit another aspect of the subject, and to give a few indications which seem to point to the conclusion, that the vegetable world is also in the possession of a species and degree of instinct or sensation.

Until of late, it has been the universal opinion that both these endowments must be denied to vegetables; but with the progressive discovery of the motions alluded to, and of the several facts about to be related, this belief is giving way to what seems a perfectly allowable deduction from these facts—an opinion of precisely the opposite character, however startling it may appear to many who have hitherto regarded plants as only a grade above the inorganic kingdom. A short consideration of the subject, in the following manner, may prepare the way for the admission; and we believe few who will calmly discuss the question, will leave it

\* To prevent misapprehension, it seems necessary for us to state that this and a previous paper are the composition of a naturalist who has forwarded them for our insertion. Believing that the subjects of which they treat are full of novelty and interest, we give them a place, without vouching in any respect for the accuracy of the writer's hypotheses or conclusions.—Ed.

with a doubt upon the mind. If the evidence can scarcely be considered as conclusive, it is at all events of such a remarkable, plain-speaking character, as to call for a certain amount of credence and attention.

It is scarcely necessary to remind the reader, that at what may be called the confines of the zoological kingdom, there exist certain simple forms of animalcules, in which no nerves are, by our present instruments, to be discerned; but we can hardly conceive these creatures to be destitute of them, when we find that they execute movements of a character bearing the most precise analogy to those of higher orders of created beings. Thus they chase their prey through the water; in turn they themselves flee from their enemies; they possess the liveliest powers of locomotion, at the complete control of the creature; are endowed with the power of digestion, and of the perception and discrimination of their appropriate nutriment; which are all functions in nobler creations, dependent upon the existence, if not of centres of sensation, at any rate of nervous fibres. It is easy, therefore, to believe that in their case nerves, and a stimulative tissue not necessarily identical with ordinary nerves and muscles, do exist, but are imperceptible, owing to our defective and limited powers of investigation. But when these analogical inferences are developed to a point yet further, when they are made to embrace *confervæ*, the humblest of vegetable forms, a difficulty arises in the admission of the existence of nerves or muscles, for which no other cause can be adduced than that, in the more complex structures of the same kingdom, such an apparatus is not to be found; physiologists hesitating to admit the existence of other excitable tissues than animal muscle, and of other stimulus-conveying fibres than animal nerves. An assumption like this is not absolutely necessary. It is impossible to say that certain vegetable organs and tissues only discharge one function; it is perfectly conceivable that they may be endowed with two or more, abstractedly. Who, for example, could witness an oscillatorial filament wriggle itself out of a plate, and move towards the light with an invincible pertinacity, and could feel a doubt that it possessed the instinct that light was good for it; in obedience to which impulse, it was using every effort in its power to reach it? Place by its side a humble animalcule, which, with movements of equal vivacity, dances hither and thither in its native element, and let science put her finger upon the point where sensation ceases on the one side, and some new faculty commences on the other.

Taking a hurried survey of the striking movements enumerated in a former paper. Here are plants folding close their delicate organs from the cold evening air, expanding them again to the genial sunbeam; here are plants shrinking from the drenching rain, or opening to welcome the refreshing shower, as their different constitutions may suggest; here are some casting forcibly off every intruder to the honey cell; here are others, on the contrary, spreading their leafy traps for the capture of such offenders; here are a few abashed and shrinking from the touch; and finally, were *St. Vitus' Dance* a vegetable malady too, here is one—the *Desmodium gyrans*—which is decidedly a victim to it.

Leaving, however, the discussion to another and more befitting arena, we would proceed to indicate that, putting aside the question of the amount of sensation involved in the motions referred to,

there are other and even more remarkable points of view from which to contemplate the subject.

There is a class of poisons which may be shown to operate purely upon the sensation of animals, causing no chemical or physical disorganization of their structure; these are opium, belladonna, Prussic acid, nux vomica, tobacco, &c. If, now, it can be shown that these agents act in a deleterious manner upon plants, we have the presumptive evidence of strong analogy in support of the idea of vegetable sensation. M. Marcet has set the question at rest. From his experiments, it has been found that, even in minute quantities, the poisons specified are destructive to vegetable life. If a leaf of the sensitive plant is cut off, and placed in pure water, it curls up its leaflets, but in a short time they again expand, and retain their irritability for several days, expanding and shrinking up as on the plant itself, when touched with the finger or with a needle; but if another leaf is cut off, and placed upon water, to which a solution of belladonna has been added, the leaflets collapse, and subsequently expand; but after this it seems paralyzed—its life is extinct, and even if it is then put into pure water, it no longer can be made to contract. Electricity, extreme cold, mineral poisons, arsenic, &c., are productive of similar consequences. Every one is familiar with that simple experiment, the fumigation of a rose-tree, to destroy the insects which infest it. It affords us an instance of the action of a narcotic poison not only upon the insects, but also upon the plant itself. The little creatures tumble from the branches, stupefied with the tobacco fumes. And at the same time it may be observed that the leaves of the rose droop, some of its youngest and tenderest branches hanging down, and only recovering, after exposure to a purer atmosphere, their former position and healthy aspect. The effect of these poisons obviously indicates that all plants possess an occult principle, having a certain analogy to sensation. It is found, also, that when certain chemical substances in solution are presented to their roots, the foreign matter is carried into the circulating system of the plant, but is almost invariably, if it is unsuitable for its nutrition or for the formation of its secretions, carried down again, and thrown off by the roots. Even in the selection of its proper food by the delicate spongiolæ of the root, it would seem as if some kind of discerning faculty were in operation, which at any rate may be compared to animal instinct.

The struggle which plants growing in a cellar or darkened room make towards the light, however small the glimmer which may pierce the darkness, and the sedulous manner in which the radicle and plumule of the germ respectively avoid and seek the same influence, seem to speak in similar language. Every one who has watched the growth of the tendrils of the vine, or the stem of the creeping-plant, must have observed that neither make any turns until they come into contact with some object around which they can twine; so that, up to a certain point, the stem of the most inveterately-twisting plant remains as straight as possible; but at the point of contact with another body, a volition immediately commences, and thenceforward it proceeds in a spiral direction around the object held in its embrace. In the case of the briony, simple contact with the object is not sufficient to cause the twisting of the stem. To prove this, the experiment of tying it with a string at a certain point has been made; but the plant made no

attempt to twist at that point. A small weight was then attached to the string, and the tendril immediately began to shorten itself by making several spiral turns. This seems to indicate that the tendril of the briony, naturally, will twist only when it has the weight of the stem to support. The writer who records this experiment, and whose striking phraseology is almost indicative of his name, adds, "it is a hand seeking in the dark, and grasping what it has felt by the action of muscles remote from the sensible point."

The remarkable manner in which plants search for their food, within certain limits comparable to that of animals, appears to imply the existence of some higher impulse than mere fortuity. The strawberry plant will thrust its "runners" completely across a garden walk, on to a bed of soil on the opposite side, where it will for the first time, as it were, perceiving its object to be gained, push out roots, and form a new plant. It is not uncommon to find travellers relating the most singular freaks played by trees and plants in quest of nutriment. Trees are sometimes found which have taken root on one side of a deep ravine, and having exhausted the sterile soil on that side, have pushed forth roots completely across the abyss, which have gained its opposite side, and there struck deep into more fertile ground. Plants are often to be found which have rooted in old walls; but soon experiencing the want of soil, extend long roots in the direction of the ground, which they penetrate, and then form radicles. If the roots of a plant are accidentally denuded, and there happens to be some moist substance, as wet moss, in their neighborhood, they direct themselves towards it, and eventually succeed in reaching it.

A modern and eminent writer narrates, that "among the noble collection of palm-trees cultivated by the Messrs. Loddige of Hackney, near London, was one furnished with hooks near the extremity of the frond, evidently designed for attaching it to the branches of trees for support, when growing in its native forest. The ends of the fronds were all pendent but one, which, being nearest to the rafters of the conservatory, lifted its end several feet to fasten to the rafter; none of the other fronds altered their position, as they could not have reached the rafter had they attempted to do so." What a striking recognition in the tree, of an evidently fortuitous circumstance! What but instinct could have directed that vegetable hand to the roof for its support! and what but that keep pendent the branches which would have sought it in vain! We may conceive a similar impulse to direct the branches of the great banyan-tree, when they can no longer support the ponderous vegetation, to send down roots which shall form at once a support and a source of fresh nutriment to it, extending the giant tree in every direction around the parent trunk.

The pandanus, or screw-pine, so called from the cork-screw-like arrangement of its leaves, commonly found in Madagascar, the isle of France, and the Indian Archipelago, affords us a most curious example of a self-preserved instinct. The tree has somewhat the appearance as if the earth had been removed from its roots, leaving them dangling in the air. This arises from its sending down long aerial roots for some distance above the ground. These roots are protected at their extremities by a loose cup-like investment of cellular membrane, which defends the delicate tissue of the tip from any injury until it reaches the

soil, where its use is at an end, and the roots then bury themselves in the earth. The trunk of the tree is supported at some distance from the ground by a number of such roots, and as it year by year increases in size and weight, there would be a risk of the downfall of the whole structure, were it not that, to compensate for the increasing ponderosity of the trunk, fresh roots are thrown out, which, reaching the ground, form fresh props to the superstructure, acting also as buttresses against the too great bending of the tree before the wind. But it is worthy of remark, that if the tree leans to one side, endangering its safety during the next storm, it puts out roots, at some distance above all the rest, on the inclining side, which reach the earth, and form supports to the trunk perfectly analogous in their intention and use to the shores and timber-work used by human architects to prop up a building in danger of falling.

Plants, in a few instances, would appear as if endowed with a care for their offspring. Not to enumerate the mechanical contrivances for this end, which do not belong to our subject, the mangrove, for example, retains its berries until they are firmly rooted by its side, when the parental connexion is at an end. This is true also of other plants; while some, whose drooping flowers would drop the ripened seed at the period of its maturation, erect their stems, as if to prevent the seeds falling out.

Vegetable instinct seems also to find an illustration in the adaptability of plants to different climates. It is well known that plants brought from tropical countries, after a little time inure themselves to the altered circumstances of the soil and temperature of temperate latitudes: the most familiar instances are the potato and the dahlia, both natives of tropical climates. Kalm, one of the disciples of Linnæus, relates that apple-trees sent from this country to New England blossomed for a few years too early for that climate, and bore no fruit, but after that learnt to accommodate themselves to their new situation. It is a fact, that seeds and roots brought from southern latitudes germinate in our country sooner than others brought from more northern ones—although exposed to equal conditions of temperature—owing to their acquired habits; but these in time fall in with the new conditions.

To take a concluding glance at the subject. It is manifestly impossible in this place, as indeed it would also be inappropriate, to do more than collect a few scattered instances of phenomena of daily occurrence in the vegetable world which seem to point to the possession of a certain amount of sensation by them. In an inquiring spirit we may ask the nature and the cause of these, while it would be presumptuous to pronounce a decided opinion upon the question. It is reserved for modern science to link these phenomena together, and refer them to their proper cause; ours is the more humble attempt to awaken an interest, which may stimulate further and deeper research.

But while the present state of our information forbids all dogmatizing upon the subject, we are by no means precluded from the formation of a strong and not unreasonable supposition that some such faculty as sensation, in a low, and often in an obscure degree, appears to exhibit itself in some, if not actually in all the examples detailed. Until the contrary is proved, let us be content with this, which, at all events, is an ennobling and exalting belief; it is one which elevates our conceptions of the great Creator's benevolence in all his operations; and whether we agree or not with Wordsworth—

"And 'tis my faith that every flower  
Enjoys the air it breathes"—

there can be no question that the subject demands considerably more attention and consideration than it has hitherto received.

Were we to indulge in the dreams of poetic imaginings, we might expand our views, and conceive—probably not altogether without truth, even where no more prominent indications of vegetable instinct and sensation exist than are to be found in the fresh luxuriance of a thriving vegetation—that there is a world of sentient creatures delighting in the balmy rain, gladly welcoming the returning sun, and silently resting during the shades of night; rejoicing in a measure of happiness which, if not strictly comparable with that of higher beings, yet is all good of its kind, and adds its humble voice to the hourly anthem offered by creation to creative love.

In bringing the subject to a close we may borrow the words of an author before cited, and, while unwilling to express a decided opinion upon the subject, we may still confess our own strong inclination to his belief:—"If the daisy, the germ struggling for the surface, the tendril searching for support, the root seeking water, the mimosa, and the beldysarum, are without metaphysical powers, without sensations of consciousness, whence should the sponge and the aleyonium (recognized members of the zoological family) possess them?"

From Chambers' Journal.

#### PROPER NAMES IN POETRY.

WHILE perusing the works of the best poets, we often find—apart from all that strictly belongs to the subject—a charm in the proper names and the manner in which they are introduced. The very sound of these names is felt to be beautiful. Beautifully do they blend with the liquid measure; still more beautiful are the associations which they awaken. Word after word meets our eye as we read, recalling the tasks of our schoolboy days, the well-thumbed volume over which we pored wearily, little anticipating the pleasures we were storing up for a future day. Here a name, long buried beneath the accumulating mass of diurnal cares and duties, starts out in relief, and reminds us of our early lessons, when for us all history was *true*, and our sympathies were all on the side of the world-conquering legions of Rome. We remember many feats of heroic bravery and inflexible virtue, and feel glad when, in after-life, we meet the names of the actors perpetuated in poetry. Sometimes with the recollection of the studies comes the memory of many of the happiest of our youthful days—of visits and journeys in sunshiny weather, interwoven with achievements of the ancient time. Some of the names we not unfrequently read are connected in our minds with whatever is great and glorious. The orator quotes them when fanning with his eloquence the slumbering fire of patriotism; the statesman and philosopher cite them as noble and enduring specimens of human genius; and the historian records them as examples worthy of our admiration and imitation—

"A thing of beauty is a joy forever."

The names of places which have been the scene of great events, of objects linking the present with the past, of countries where thought has shaped itself into matchless forms and immortal deeds,



possess the same charm as the names of persons. What a brilliant page of history opens before us on reading Byron's lines!—

"The mountains look on Marathon,  
And Marathon looks on the sea;  
And musing there an hour alone,  
I dreamed that Greece might yet be free;  
For, standing on the Persian's grave,  
I could not deem myself a slave."

And further on—

"Of the three hundred grant but three,  
To make a new Thermopylæ!"

startles us by the ease with which the accent lends itself to the rhyme, while we recollect the thrill with which we first read of the little devoted band of Spartans contending, in the narrow defile, against the overwhelming hosts of Xerxes. And what a flood of associations, so to speak, rushes upon us with the lines in the splendid apostrophe to the Ocean!—

"Thy shores are empires, changed in all save thee—  
Assyria, Greece, Rome, Carthage, what are they?"

We are carried back to the infancy of society and of empire; to our biblical lessons; to the Punic wars, Hannibal, Regulus, Marius; to the beautiful in art, the sublime in philosophy, and wondrous in fable.

In another place we feel the almost magical effect of the introduction of the names of persons—

"Oh for one hour of blind old Dandolo!  
The octogenarian chief, Byzantium's conquering foe."

evoking from the past the deadly struggle between the haughty Venetian and indomitable Turk. Nor do the names lose any of their charm when connected with the more peaceful and humanizing pursuit of literature and science. In one place the poet speaks of the "starry Galileo," and presently we read—

"The friend of Petrarch—hope of Italy—  
Rienzi! last of Romans!"

And elsewhere—

"Alas for Tully's voice, and Virgil's lay,  
And Livy's pictured page!"

Dryden's writings, among which "Alexander's Feast" may be instanced, contain numerous examples of the happy introduction of proper names; and the vast and exuberant mind of Milton has heaped them together in his immortal poems, where every word is a picture. How much of Hebrew history lies in these lines from *Paradise Lost*!—

"Reared in Azotus, dreaded through the coast  
Of Palestine, in Gath, and Ascalon,  
And Accaron and Gaza's frontier bounds,  
Him followed Rimmon, whose delightful seat  
Was fair Damascus, on the fertile banks  
Of Abbana and Pharphar, lucid streams."

And of classic memories in stray gleanings from the *Paradise Regained*, where "Athens" is described as "the eye of Greece, mother of arts:"—

"See there the olive grove of Academe,  
Plato's retirement, where the Attic bird

Trills her thick-warbled notes the summer long;  
There flowery hill Hymettus, with the sound  
Of bees' industrious murmur, oft invites  
To studious musing; there Ilissus rolls  
His whispering stream."

Among our earlier poets, Spenser abounds in beautiful examples of the truth we are attempting to illustrate. It is scarcely possible to turn over the leaves of the *Faery Queen* without confessing the art displayed in the introduction of proper names. But there is one portion of this musical poem which more particularly applies to our present purpose: we refer to the marriage of the Medway and the Thames, where the bard, contemplating his task of enumerating the principal rivers of the world, says—

"Oh, what an endless work have I in hand,  
To count the sea's abundant progeny!"

How well he performs his work, let the following passage testify.—

"Great Ganges, and immortal Euphrates;  
Deep Indus, and Meander intricate;  
Slow Peneus, and tempestuous Phasides;  
Swift Rhene, and Alpheus still immaculate;  
Araxes, feared for great Cyrus' fate;  
Tybris, renowned for the Romans' fame;  
Rich Oranochy, though but known late;  
And the huge river which doth bear the name  
Of warlike Amazons, which do possess the same."

In this verse we are carried into each of the four quarters of the world in succession, ending with the then recently-discovered Orinoco and Amazon, whose names are associated with Columbus and the daring adventurers of Spain. But the poet comes back to his own island, and sings—

"Next there came Tyne, along whose stony bank  
That Roman monarch built a brazen wall,  
Which mote the feeble Britons strongly flank  
Against the Piets, that swarmed over all,  
Which yet thereof Gauls ever they do call;  
And Tweed, the limit betwixt Logris' land  
And Albana; and Eden, though but small,  
Yet often stained with blood of many a band  
Of Scots and English both, that tinted\* on his strand."

Many portions of Drayton's *Polyolbion* are of a similar character: the stately metre is well adapted for the display of the famous names which he introduces while chanting the praises of the Trent—

"She takes into her train rich Dove, and Darwin clear—  
Darwin, whose font and fall are both in Derbyshire;  
And of those thirty floods that wait the Trent upon,  
Doth stand without compare, the very paragon."

And further on, in a comparison with other streams, he says—

"What reck I! let great Thames, since by its fortune he  
Is sovereign of us all that here in Britain be,  
From Isis and old Tame his pedigree derive;  
And for the second place, proud Severn that doth strive,

\* Were killed.

Fetch her descent from Wales, from that proud  
mountain sprung,  
Plinillimon, whose praise is frequent them  
among."

Not less spirited is one of the same writer's sonnets, in which he trips lightly from flood to flood, combining within the compass of a few lines, a thousand historical and poetical associations—the haunts of Robin Hood and his merry men, the invasions of the old sea-kings in their swift-rowing galleys, feuds and forays on the borders ere men had learned that life offered higher duties and pleasures than fighting:—

"Our flood's queen, Thames, for ships and swans  
is crowned;

And stately Severn for her shore is praised;  
The crystal Trent, for fords and fish renowned;  
And Avon's fame to Albion's cliffs is raised.  
Carlegian Chester vaunts her holy Dee;  
York many wonders of her Ouse can tell;  
The Peak, her Dove, whose banks so fertile be;  
And Kent will say her Medway doth excel.  
Cotswold commands her Isis to the Thame;  
Our northern borders boast of Tweed's fair  
flood;  
Our western parts extol their Willy's fame;  
And the old Lea brags of the Danish blood."

Of a different character are the Castle of Indolence of Thomson, and Falconer's Shipwreck; yet they afford many rare instances of the power of verbal association. Nor are the writings of Miss Barrett and Alfred Tennyson devoid of similar beauties; they show us a marvellous plasticity in the apparently most unmetrical words and phrases. Campbell's stirring poem on the battle of Hohenlinden, Collins' Ode to the Passions, and some of Gray's productions, present other varieties of effect, which may be extended through the whole range of poetry. Rogers has some pleasing combinations in the Pleasures of Memory, verifying one of his own poetic truths, that "kindred objects kindred thoughts inspire," in a few graceful lines—

"And hence the charm historic scenes impart;  
Hence Tiber awes, and Avon melts the heart.  
Aërial forms in Tempe's classic vale  
Glance through the gloom, and whisper in the  
gale;  
In wild Vaucluse with love and Laura dwell,  
And watch and weep in Eloisa's cell."

Burns, again, Scotland's peasant bard, was a master of the vernacular of proper names, which, in his alternating mood, he strung together without any apparent regard to symmetry. Yet how great is their charm, whether found in some of his energetic sarcasms or glowing aspirations! How the effect of his patriotic songs is heightened by the introduction of proper names, let those tell who have sung them on the heath-clad hills of his native country. With what truth does he sing of three brother poets in Coila's address!—

"Thou canst not learn, nor can I show,  
To paint with Thomson's landscape glow;  
Or wake the bosom-melting throe,  
With Shenstone's art;  
Or pour, with Gray, the moving flow  
Warm on the heart."

The writings of Scott abound in picturesque examples of the magic of association; a whole history, the memory of a life, are often conveyed in a single word. We are told that a great portion of

Marmion was composed while the author was galloping up and down on the sea-shore at Musselburgh; and, judging from the lively and musical "cadency" of the poem, we may believe that it was written with but little of what Butler calls "the drudgery of brains." We who live in the south, well remember the delight with which we read the lines—

"And now the vessel skirts the strand  
Of mountainous Northumberland."

The latter word brought the whole border county before us, as we had often longed to see it: its rocky shores and ruined castles, broad fells and lofty hills, bright and tortuous streams, Chevy-Chase and the Cheviots, all flashed at once on our mental eye. The same effect would not have been produced in reading prose. It seems that measure and harmony are needed for the effectual working of the spell. We have since walked through the county in its length and breadth, and felt that all the glorious associations connected with the romantic scenery were heightened by having been turned into poetry.

But to return to Scott. His description of the scene viewed by Marmion from the top of Blackford hill, affords numerous instances of the beautiful and suggestive effect of *names*; and again, in reply to the "royal vaunt," when the haughty lord declares—

"But Nottingham has archers good,  
And Yorkshire men are stern of mood;  
Northumbrian prickers wild and rude.  
On Derby Hills the paths are steep;  
In Ouse and Tyne the fords are deep;"

we feel that the true characteristics are preserved, and that, were the names changed or transposed, the whole of the charm would be lost. The same spirit runs through the succeeding cantos. The camp, Lady Heron's song, the "awful summons" from the cross at Edinburgh, the fatal battle of Flodden, acquire new life from the distinctive appellations scattered through them. Neither are the introductions to the cantos deficient in examples of a different character. Who has not felt a genial glow while reading the lines—

"On Christmas eve the bells were rung,  
On Christmas eve the mass was sung?"

The finest portions of Scotland's magnificent scenery are enshrined by name in the poems of this writer. It would be easy to multiply instances, were it not better that readers should have the pleasure of discovering them for themselves. His ballad poetry, too, is singularly effective, and partakes much of the simple beauty of the old English writers, whose productions were the result of the poetical genius and temperament of a people yet untrammelled by scientific theories and matters of fact. When the bards and skalds of the early ages were the only historians, the names and exploits of their heroes were associated in songs of vivid and eloquent poetry, heightened by the figurative language of a race innocent of all philosophy save the right of might. Some portion of their spirit has, however, come down to our own times. In the Lays of Ancient Rome, by Mr. Macaulay, the metrical romances are revived—the ballad poets of the seven-hilled city reappear to chant their measured histories. The sonorous Latin names tell with surprising effect, and adapt themselves

beautifully to the flow of the verse. We select a passage from the defence of the bridge by Horatius Cocles and his two brave companions against the three Tuscan chiefs, advancing from the invading ranks of Porsena:—

“Then Ocnus of Falerii  
Rushed on the Roman three;  
And Lausulus of Urgo,  
The rover of the sea;  
And Aruns of Volsinium,  
Who slew the great wild boar,  
The great wild boar that had his den  
Amidst the reeds of Cosa's fen,  
And wasted fields, and slaughtered men,  
Along Albinia's shore.”

Equally effective is the prayer of Horatius, as he plunges into the river after the fall of the bridge:—

“Oh, Tiber, Father Tiber!  
To whom the Romans pray,  
A Roman's life, a Roman's arms,  
Take thou in charge this day!”

In the War of the League, by the same author, many fine effects occur; but perhaps the most interesting is his noble poem on the arrival of the Spanish Armada off the shores of England, recalling many glorious associations; while the native Saxon names fall into the metre not less appropriately than the majestic Latin. The poem opens with the arrival of a merchant ship at Plymouth, the crew of which had seen the Spanish fleet at sunrise off Cape La Hogue, sailing up the channel with

“The richest spoils of Mexico, the stoutest hearts  
of Spain.”

Active measures for defence, keeping a look-out on the enemy, and to despatch the news inland, are immediately taken. “The stout old sheriff” comes with his guard, and plants the royal standard as

“Night sank upon the dusky beach, and on the  
purple sea—  
Such night in England ne'er had been, nor e'er  
again shall be.”

The movements consequent on the rapid diffusion of the intelligence by means of beacon fires are finely described:—

“From Eddystone to Berwick bounds, from Lynn  
to Milford bay,  
That time of slumber was as bright and busy as  
the day;  
For swift to east, and swift to west, the warning  
radiance spread;  
High on St. Michael's Mount it shone—it shone  
on Beachy Head.

• • • • •  
The fisher left his skiff to rock on Tamar's glittering waves,  
The rugged miners poured to war from Mendip's sunless caves.  
O'er Longleat's towers, o'er Cranbourne's oaks,  
The fiery herald flew:  
It roused the shepherds of Stonehenge, the rang-  
ers of Beaulieu.”

The news reaches London, from whence it speeds without a pause to every quarter of the island. The rapid succession of proper names renders the concluding portion peculiarly effective: county after county comes before the mental vision as we read—

“And eastward straight, from wild Blackheath, the  
warlike errand went,  
And roused in many an ancient hall the gallant  
squires of Kent.  
Southward from Surrey's pleasant hills flew those  
bright couriers forth;  
High on bleak Hampstead's swarthy moor they  
started for the north;  
And on, and on, without a pause, untired they  
bounded still;  
All night from tower to tower they sprang—they  
sprang from hill to hill,  
Till the proud Peak unfurled the flag o'er Dar-  
win's rocky dales—  
Till like volcanoes flared to heaven the stormy hills  
of Wales—  
Till twelve fair counties saw the blaze on Mal-  
vern's lovely height—  
Till streamed in crimson on the wind the Wre-  
kin's crest of light—  
Till broad and fierce the star came forth on Ely's  
stately fane,  
And tower and hamlet rose in arms o'er all the  
boundless plain—  
Till Belvoir's lordly terraces the sign to Lincoln  
sent,  
And Lincoln sped the message on o'er the wide  
vale of Trent—  
Till Skiddaw saw the fire that burned on Gaunt's  
embattled pile,  
And the red glare on Skiddaw roused the burgh-  
ers of Carlisle.”

The beauty and effect of these lines are perfect, and bring the great historical event in full reality before us. Each name, as it occurs, embodies a host of associations, and as the eloquent author, in another place, truly observes—“Its effect is produced not so much by what it expresses, as by what it suggests; not so much by the ideas which it directly conveys, as by other ideas which are connected with them.”

From Chambers' Journal.

#### THE NORTH POLE.

THE possibility of reaching the north pole is an idea which has long occupied the minds of enterprising and scientific navigators. Several attempts have been made, and though unsuccessful, the object appears not yet to be given up. Sir W. Parry, in a recent letter to Sir John Barrow, proposes that the intended exploring expedition should winter in Spitzbergen, and then, in the month of April, set out from Hakluyt's Headland, which is six hundred geographical miles from the pole, and endeavor to reach this point by travelling over the yet unbroken-up ice, and, after a short stay, returning again by the end of May, ere yet the summer sun had melted and broken up the ice. Sir John Barrow proposes another plan, founded on the supposition that the polar region is open sea, and free of ice during the summer. He suggests that two small vessels, similar to those sent to the southern or antarctic seas, should be sent to Spitzbergen in early spring, so as to take the opportunity of the polar sea being open, and about the middle of August sail direct for the pole. A month's sailing, at the rate even of twenty miles in the twenty-four hours, would thus be sufficient to reach the point of destination: while a month's stay there, and another month to return, might all be accomplished



before the commencement of next winter's frost. That enterprising sailor, Captain Weddel, in a pamphlet published several years ago, demonstrated pretty clearly the probability of an open sea around both the north and south poles, and more recent observations all tend to encourage this idea. The continued presence of the sun above the horizon for six months would afford sufficient heat to melt the accumulated ice of the previous long winter; and if no high land exists in the regions north of Spitzbergen, the probability is, that not more than one season's snow and ice remain or accumulate.

But many may be disposed to ask, What would be the use of such an exploration? To these a reply may be made in the words of an old navigator:—"The north pole is the only thing in the world about which we know nothing, and that want of all knowledge ought to operate as a spur to adopt the means of wiping away that stain of ignorance from this enlightened age." It would be an achievement, certainly, to put one's foot on the very point of the axis around which this mighty globe turns—to look around a horizon above which the summer sun appears to move round and round in its daily circle without ever ascending or descending, where there is uninterrupted day, and twelve o'clock at midnight is exactly the same in all respects as twelve at noon. At first view, a very erroneous idea might suggest itself—that at this point or pivot the earth's motion would be more perceptibly rapid than at any other point of its surface; that we should, in fact, see the earth spinning round like a wheel or a top. Now the fact is exactly the reverse. The space passed over at the earth's axis is shorter than in any other point of its circumference, and consequently the apparent motion is slower. If you look at the axis of the hour-hand of a watch, no motion is perceptible; but by watching for some time the extremity of the same index, you may observe a perceptible portion of space travelled over in the course of a few minutes.

Perhaps, on reaching the pole, not an inch of land would be found on which to rest. This would increase the difficulties of the visit. For were it all sea, and probably a deep sea, there would be no place of anchorage, and no means of remaining steadily at rest till observations could be made. Besides, by the moving about of the vessel, the reckoning would be unavoidably lost; for the sun, pursuing a uniform line along the horizon, there would be no meridian, and consequently no means of calculating the course in which to steer for home. From this circumstance, it is evident also that the time of day, or rather of the twenty-four hours, would no longer be ascertained by the rising, the noon-day altitude, or setting of the sun; for to an observer at the pole no such changes would take place, except to the small amount of the daily change of declination. Thus not only to the eye, but also for the practical purpose of obtaining the time by astronomical observation, the sun would appear throughout the twenty-four hours neither to rise nor fall, but to describe a circle round the heavens parallel to the horizon. This common method of obtaining the time would entirely fail. Indeed, however startling the fact may seem, it may be asserted with truth that there would be no longer any such thing, strictly speaking, as apparent time in the heavens at all. This will be evident, by reflecting that what is called apparent

time refers only to the particular line or meridian on which an observer is placed, and is marked by the approach to, and recession of, the sun from that meridian. An observer at the pole being on no one meridian, but at the point where all meridians meet, apparent time would have to him no longer existence or meaning. In ascertaining any particular position, the compass, it is true, might still be of use. From the discovery of Captain James Ross, it is known that the magnetic pole does not coincide with the true pole of the earth, but that the situation of the former lies in a lower latitude. Now, as it is highly probable that at the pole even the compass would still act freely, the dip of the needle not being so complete as to prevent the horizontal motion still to take place, the pointing of the north pole of the needle to the magnetic pole would be a means of ascertaining the homeward course. The chronometer, too, under a certain modification, would enable the voyagers to ascertain a given meridian. A common watch or chronometer would be useless, because the dial-plate being marked with only twelve hours, when the hour-hand pointed to twelve o'clock, there would be no knowing whether it was twelve at noon or twelve at midnight that was indicated, the sun being equally visible at both. To obviate this, chronometers have been constructed with dial-plates of twenty-four hours, and the hour-hand making only one revolution in that period. Thus, whenever such chronometers indicated apparent noon at Greenwich, the sun would be exactly over the meridian of that place, and so of any other place of known longitude; as, for instance, the harbor where the voyagers had left their ship, and to which they desired to return.

As scientific objects of pursuit, Sir J. Barrow suggests, among others, the measurement of a degree of the meridian, commencing at the pole itself, in order to decide the actual degree of *flattening* of the spherical form of the globe which takes place at the poles. Observations on the tides, too, as far as practicable, the winds, oceanic currents, magnetism, the aurora borealis, would all be interesting to science; and, indeed, it is not possible to say what matters of interest or of practical use might not present themselves to observation on visiting a part of the globe on which the foot of man has never yet trodden.

In the event of finding land, however small the portion, around the pole, all these observations would of course be greatly facilitated. It may be presumed that any such land will not be mountainous, as no icebergs are ever sent down from that quarter; these masses having been ascertained to be the production of glaciers on the sides and valleys of high mountains, such as those in Spitzbergen and Greenland. On such land the pendulum could be swung, and the rise, fall, and direction of the tides observed—the land itself could be examined, and the nature of the soil—its organic productions, either of a past or present era, ascertained—and thus a polar flora and fauna be presented to the scientific world.

A LETTER from St. Petersburg states that the Countess Samoilow, a widow who had contracted a second marriage with a foreigner at Trieste, has been condemned to lose her property, which will be put up to public auction within the space of six months. The countess has large estates in Russia.

From Chambers' Journal.

## THE TCHINGEL GLACIER.

[The writer of this paper introduces it in the following manner:—"I observed, in your number for January, an account of the very difficult ascent of the Wetterhorn, undertaken by Mr. Speer. As a narrative of a somewhat similar expedition across one of the most unfrequented glaciers of Switzerland may not be uninteresting to some of your readers, I send you the following abridgment from the notes I made immediately after passing it in the summer of 1844." He then proceeds—]

OUR excursion was one that is rarely undertaken, and has, I believe, never before been described. This circumstance, together with the peculiarities of the route, may make the sketch of it bear somewhat the appearance of novelty, albeit it is laid in a country so thoroughly explored and described as Switzerland. The head of the valley of Lauterbrunnen is closed in by a part of the giant chain of Swiss Alps, whose summits are crowned eternally with snow, and whose sides are clad with ice. A pass of great height leads from the valley at right angles to it, and descends upon the village of Kaudersteg through the Oeschinen Thal. Higher up the valley, and leading on from its extremity, but thousands of feet above it, lies the great Tchingel Glacier. To visit this, and, if possible, to cross it, was our present object.

A walk of a few hours brought us to our destination for the evening; it led us past the fall of the Staubbach, its waters swept away, as they fell, by distance and the wind, and also past that of the Schmadribach, whose situation makes it the more picturesque of the two. A rude path at first, and soon after none at all, led us more than a thousand feet above the valley; sometimes among fir-trees, and sometimes through little streams, that trickled down to add their mite to the lake of Thun. At this height, on an open piece of turf, a single chalet is erected, to enable a herdsman to tend a few cows while they are at the pastures. Here the brawny Swiss, who was to be our host for the night, braves the weather annually, until the snow obliges him to descend, although he numbers sixty-seven years. A hay-loft above the cows served us for a sleeping apartment, till the dawn of morning warned us that it was time to depart.

But alas! the morning proved most unfavorable to our excursion. A fog had set in, so thick that we could see but a few paces in advance of us. We waited some hours, in hopes that the weather would clear; and this hope failing, we set off in the mist. Had we at that time been able fully to appreciate the danger of the route, we should have decided otherwise; but as the chamois-hunters, who acted as our guides on this occasion, declared themselves willing to proceed, we set off. For some distance our way lay along the side of a steep part of the mountain of the Steinberg, but the precipice was principally hid by the mist. Crossing several streams, which, in consequence of the steepness of the ground, tumbled almost in the manner of cascades, we arrived at a quantity of snow, the remains of an avalanche of considerable size. This we crossed, and then climbed, for the space of a quarter of an hour, a hill formed of the debris brought down by the waters from above. We now arrived at the lower part of the glacier. It was covered in great measure with snow, and formed a gently inclined plane. At the side were some traces of a *moraine*—as the mass of stones which the glacier, in its progress, brings down from the summit of the mountains is called. The last occasion

on which the glacier had been crossed was early in the year. A considerable change had, in the mean while, taken place. The sloping nature of the ground beneath it had had its usual effect upon the ice. In its advance it had cracked, by reason of its own weight, and large impassable chasms had formed. Small streams of water were running through some of them. By keeping, however, the line of our route, and following the chinks to their head, we evaded those of greatest size. All this time the fog had been closing in, thicker and thicker, and we now held a council to decide on our future plan. There were two ways of reaching the summit of the glacier: the one, by following its course, and passing under the Gletcher mountain, would have taken us by a sweep into the great plain of snow at the top; the other, by climbing the crags which skirt it, and cutting off the angle, would lead us to the same spot. The density of the fog, and the delay we had made at starting, seemed to require us to hasten our expedition. Having, therefore, sent on one of our party to reconnoitre, and finding that there were no streams, it was finally determined to proceed by this, the more rapid, but more dangerous way, and to climb the precipice, called by the chamois-hunters "the step of the Tchingel."

Leaving the glacier, for some time we mounted an acclivity formed by a downfall of shale and mud. It was so steep, that we were obliged to continue the ascent without ceasing, in order to prevent ourselves from sliding backwards. By this, we arrived at a place where Hannibal's expedient of destroying the rock with vinegar seemed necessary to be put into execution. The Tchingel Schrit, which now lay before us, was apparently as impassable as any rock that reality or fiction could conjure up. It is a precipice altogether perpendicular; and along the top of it runs a narrow ledge, in face of the upper precipice, where there is bare room for the footing of one person at a time. Below lay the precipitous hill of shale, on which we could only stand with the assistance of our alpenstocks. To attempt to descend it again, would have been to court a difficulty much greater than we had already found in its ascent, on account of the softness of the material, which gave no hold to the footing. We saw, therefore, that our only way lay over the rock before us, there being no room for hesitation, had we for a moment doubted. Our position was, in fact, one of considerable danger. The hill on which we stood had gradually grown narrower in the ascent, after the form of a pyramid, till, at the top, it was only a few yards wide. Thus if, in climbing the precipice before us, we should slip, our fall would not be immediately upon the hill, but into the depth below, which continued one immense chasm of many hundred feet. From the face of the rock, here and there pieces of stone jutted out; of these, some were only a few inches in size, affording a very precarious footing. One or two were of more considerable dimensions. In stepping upon one of the latter, the youngest guide, perceiving that it trembled under him, struck it a few times with his foot. It shook, cracked, and gave way. It fell into the abyss below, rattling and echoing whenever it struck against the side of the rock, till the noise it made was lost in distance long before it reached the bottom. We looked in each other's faces, I believe, for an instant, and read in every countenance the expression of our own feelings. If another stone gave way, or if we missed our footing on the ledges, now

rendered slippery by the moisture, or should the apprehension of the dizzy height unman us for an instant, we had already had evidence of the road we must follow. But the Rubicon was passed, and we had no choice but to proceed, without incurring a danger similar to that before us. However, the ascent did not seem so terrible at the moment. When I recall the nature of the precipice, and the attending difficulties, they appear far greater than they did at the time. I was too much occupied with attention to my footsteps; indeed, the necessity of abstracting the mind from the more disagreeable view of it, acted as a very sufficient sedative. But when some of us were arrived at the top, and we were unable to see the rest in their perilous course, every moment beyond the time which was sufficient for their reëappearance seemed to announce a fatal termination to the expedition.

Had it not been for what we had now passed, the farther ascent of the precipice above would have appeared sufficiently difficult. But if retreat had been in a manner dangerous before, it was now nearly cut off. We therefore proceeded with great care, but more alacrity, and soon after gained a greensward. A few sprigs of "forget-me-not" had found their way to this spot, and were growing in spite of the cold and their proximity to heaven. We gathered some of the flowers, as we had a sort of right to them. They seemed hardly born to bloom for any one else, and were wasting their fragrance on the desert air. We did not long experience the easy travelling afforded by the turf. It soon ceased; and, after climbing over alternate beds of shale and rough rocks, we found ourselves on the snowy remains of another avalanche. It was steep and slippery, so that we had the uttermost difficulty in keeping our footing. Indeed, one of my friends and myself fell; but, with the never-failing assistance of the alpenstock, we stayed our downward slide after we had receded about ten yards. For about half an hour we continued this ascent, till on a sudden we turned into a plain of snow, one dazzling sheet of white. We now found that, had the fog continued, we should not have been able to cross this immense tract; and that, however dangerous our return might be, we should only have had the alternative of attempting it, or of losing our way in boundless wastes of snow, more than nine thousand feet above the living world. But the fog had nearly disappeared. The prospect was one of the greatest sublimity. In front of us lay an apparently immeasurable tract of snow, on which, as yet, there was the print of no footstep. On the right, the huge aiguilles of the Blumli Alp rose with bare crags, too steep to retain any snow on their sides; on the left, the more sloping parts of the same mountain were clad entirely in white. Behind were the height of the Gletcher, and summit of the Jungfrau; below were the clouds.

As we stood for a few seconds, impressed with a feeling of the loneliness of the place, where we seemed to have reached the extremity of the earth, and were cut off from existence by the mists which lay between us and the world, we were reminded that even here the Creator has prepared an inhabitant to enjoy the work of his hands. Startled by the unwonted trespass on their haunts, a herd of chamois, fourteen in number, darted up from a hollow close to us, and began to ascend the black aiguilles of the Blumli, with an agility which we at present envied. As soon as they had reached a sufficient height to set rifle at defiance, they turned

round, and stood to look at us, as if in mockery of our want of ability to follow them; then, having satisfied their own and our curiosity, they darted off again, and were quickly lost amid impenetrable fastnesses.

And now began the real labors of the day. The snow lay many yards thick, covering the glacier. We sank into it ankle-deep, as we dragged our feet through it in silence. The cold was beginning to be felt severely, in spite of the exercise. We had stopped a few minutes to take some bread and kirsch-wasser, but the cold warned us to proceed, and our repast was finished in motion. Nothing could be more laborious than our travel through the yielding snow. The more we exerted ourselves, the more we were retarded by the half-hard crispness, which gave way as soon as we trod heavily upon it. In this manner we continued forcing our way for an hour, and yet the summit of the inclined plane was apparently as far off as ever.

The difference between our immediate view of the Swiss Alps, and the appearance they bore at various distances, recurred to my mind, and made the present feel a yet more cutting frost. But it was not in imagination only that we felt the difference. My legs ached, and my feet were benumbed, so that I scarcely knew where I placed them. The higher we ascended the slopes, the more the snow increased in softness, and from ankle became nearly knee-deep. Our sufferings now became intense. Some of us began to feel the effect of the rarity of the atmosphere, occasioned by the great elevation to which we were arrived. Circulation had deserted my feet, and, aided by the nature of the air, the blood rushed to my head. My face became purple, I was deaf, my sight in a great measure failed me, and I plodded on mechanically, scarcely knowing or caring whither I went. As we descended on the other side, these sensations disappeared with all of us about the same place. At the summit, the hail fell with some violence for a while, and it rained the whole way down. Such is the general character of the "land of mist and snow." After traversing nine miles of it, we came upon the uncovered glacier. It was still a gently-sloping plane; but now it inclined towards the valley opposite to that by which we had first ascended. Thus the form of the whole glacier resembles a saddle bestriding a gorge of the Blumli.

As, however, the inclination was not so great, so neither were the cracks so large, but they were more treacherous, in consequence of being sometimes partially covered with snow; and in one or two instances we felt the edges yielding as we crossed them, where we had supposed we were on firm ice. We were obliged, therefore, to feel our way at every step with our alpenstocks, and by this means escaped all danger. We soon left this part of the glacier, and trod by its side the firm ledge of rocks which shut it in. After walking for half an hour, we came in full view of that part of it which empties itself into the valley. Nothing can compare with its beauty. Other glaciers fall infinitely short of it; and from the moment we beheld it, we no longer regretted the labor which brought us to it. I have seen nothing to equal it in the Mer de Glace at Chamounix, in the glaciers of Grindelwald, in the great glacier of the Rhone, or in those that lie in the neighborhood of the Orteler-Spitz. Masses of ice "mast-high," not, however, "as green as emerald," but of as rich an azure as ultramarine could paint them, formed the steep bulwark closing up the valley into which we were to



descend. Here the glacier rose in crags and obelisks, in pinnacles and towers, broken and hurled into every form like a colossal mass of crystallization.

Being now free from the extreme cold, we sat down on a wild promontory to enjoy the situation. Avalanches led continually from the glacier and the neighboring mountains; some thundering loudly near us, and others rumbling and echoing far away.

We had still a considerable journey before us. The descent, however, did not occupy much time. When we reached the valley, we walked for two hours through the very beautiful Gasterthal, until the gorge suddenly opened into the plain in which stands the cheerful little village of Kaudersteg, where we shortly arrived, cold, wet, hungry, and way-worn.

#### THE DEFENCE OF THE ALAMO IN 1836.

LETTER FROM AN OFFICER OF THE ARMY TO HIS FRIEND IN NORTH CAROLINA, COMMUNICATED TO THE NATIONAL INTELLIGENCER.

*San Antonio de Bexar, (Texas,) Aug. 24, 1846.*

On the 14th instant I wrote you a very brief letter announcing my arrival at this place. We are so far removed from the United States that intercourse is almost prohibited. Mails are so irregular that no reliance is to be placed on them, and private expresses to La Baca, and thence to New Orleans, by any vessel that offers, form the most common means of transmission. This place is very different from any in the republic as it was, and the houses and streets are not more extraordinary than the habits and appearance of the people. The most interesting object, however, in the vicinity is the Alamo. It is now a shapeless mass of ruins. The chapel is defaced and broken down, and the walls of the fort are fast crumbling to decay. Time and the elements have almost completed what the Mexican artillery commenced, and the coliseum of Texas will soon form but a shattered and mournful monument of its own existence.

On the 23d day of February, 1836, Santa Anna entered San Antonio de Bexar, and took possession of the town without firing a gun. The small garrison of one hundred and thirty men, under the command of William Barret Travis, retired, as he advanced, to the Alamo, on the opposite side of the river, determined there to offer whatever resistance to the progress of the tyrant that God and their own energies should permit. Flushed with the conquest, so easily effected, of the town, the Mexican general prepared for an immediate attack upon the Alamo. He ordered breastworks to be thrown up on every commanding point, and artillery to be planted wherever it could be made most effective. One battery was completed on the right bank of the river by the 25th, and on this day the siege commenced.

It is a dark and gloomy morning, devoted to a dark and unholy purpose. Exulting in the work of death upon which he is entering, Santa Anna crosses the river, the better to behold the success of his designs, and establishes his headquarters in a small stone building yet standing. The signal is given, and ere the sun has risen upon the scene, the roar of artillery from the Mexican battery awakens the echoes far and wide, and rouses from their slumbers the yet sleeping inhabitants. But the defenders of the Alamo have not lost sight for a

single moment of their wily and remorseless enemy: they watch the studied direction of every gun; they see the match lighted: they listen, breathless, as if even at that distance they could hear the command to fire; and when it does come, and the walls of the citadel tremble under the shock of the iron hail, and the fragments of stone are whirled aloft by the sudden impulse, they send back a shout of defiance, mingled with a discharge from their own guns, almost as deafening as the thunder of their assailants. Before the smoke rolls away, and the reverberations are lost in the distance, while the shouts of the besieged still linger on the ears of the besiegers, the cannonade is renewed, and for seven hours fiercely continued upon the walls of the Alamo. But these walls yield no more than the spirits of their defenders. The fire is steadily returned; and, though stones are shivered around them, there are stout hearts and willing hands ready to repair every breach, and to restore from the interior whatever may have been destroyed from without. Earth is thrown up; every crack or fissure closed as fast as created, by the eager efforts of those who will permit no evidence of success to cheer the hopes of their enemy. The sun has almost sunk behind the western plains when there is a pause in the work of demolition. The firing ceases for the day by order of the Mexican commander, with his thirst for blood unsatiated, for not a single drop has fallen within the Alamo. Many of his own men have bit the dust before the artilleryists and riflemen of the fort; but thus far they are unavenged. Darkness falls upon besieger and besieged; the former raise new entrenchments to prosecute the assault; the latter establish a watch for the night, and endeavor to seek that repose which shall give them fresh vigor for the contest which they know will come to-morrow.

The morning of the 26th dawns, and reveals to the occupants of the fort the effect of the midnight labors of their enemy, in the establishment of two additional batteries within the Alameda of the Alamo. The bayonets of the infantry, crossed over the river during the night, glitter in the morning beams, and the plumes of the cavalry are seen waving on the eastern hills, to intercept the expected aid from that quarter. The contest is renewed by a slight skirmish between a few of the Texans, sent in quest of wood and water, and a detachment under the Mexican General Sesma; but this is a mere overture to the grand performance of the day. The thunders of the heavy ordnance, under the direction of Colonel Ampudia, are soon roused into action: volley after volley is poured into the fort, and answered only, except at rare intervals, by the shouts of those within. There is no pause, no cessation. Still the cannonade goes on; shells fly hissing through the air, and balls bury themselves within the ramparts; but night comes on, and the Mexican general can see no progress. Baffled, but not discouraged, he advances his line of posts, and prepares with the morning light to enter again upon his task. The north wind sweeps over the prairies, as it only sweeps in Texas: a stormy lullaby to the stormy passions of those contending hosts. The darkness is broken only by the feeble blaze of a few huts, fired by the Texans, which have furnished a cover to their enemy. The flames curl upwards with a sickly glare, throw a fitful light for a moment upon the slumbering army, and expire. The reign of darkness and of silence is resumed.

On the next day the Mexicans appear inactive. There is but little firing on either side. Those

within the fort, with spirits unsubdued, and with energies weakened but not exhausted, are applying their limited resources to the purposes of defence. No heart falters; no pulse throbs with diminished power; no hand shrinks from the labor that necessity imposes; all is confidence and determination; a firm reliance springing from the holiness of the cause, and the certainty of its final triumph. Sunday follows, but brings no rest to those whom God has created in his own image, yet endowed with such unhallowed passions. Perhaps, within the chapel of the Alamo, consecrated to the worship of the Almighty, and distinguished by the emblem of man's salvation which surmounts the dome, heads may be bowed in prayer to the God of battles for deliverance from their sanguinary foe: but that foe takes no heed of Sabbaths. Exclusive followers, as they proclaim themselves, of the true church, they doom to destruction the very temple they have erected for its worship; and, kissing the cross suspended from their necks, and planted before every camp, they point their guns upon the image of that Saviour they once made the tutelary deity of the Alamo. The fire of their artillery keeps company with the minutes as they roll on. Morning, mid-day, and evening are passed, yet there is no faltering among those who are defending the Thermopylæ of Texas. Another sun rises and sets, and yet another: still the indomitable hearts within quail not before the unceasing efforts of their enemy. In spite of that enemy's vindictive vigilance, the little garrison receives from Gonzales a reinforcement of thirty-three men; additional victims for the funeral pyre, soon to be kindled by Santa Anna on the surrounding hills, as a human hecatomb to Mexican vengeance.

New batteries are erected by the besiegers; from every point around the missiles of destruction concentrate upon the Alamo. The circles grow smaller and smaller. The final hour must soon come. Provisions are not yet exhausted, but the ammunition is almost gone. Water for days has been supplied by the daring efforts of a solitary Mexican woman, who, through showers of grape and musketry, has threaded her way from the river to the castle, while her own blood has marked the path. She bears with her the spirit of her illustrious ancestor, stretched upon the racks of Cortez; and it is not the fear of death or the torture that can swerve her from her purpose. In her presence there is hope, and joy, and life. At each arrival she is hailed by the garrison as the guardian angel of the Alamo, and until it falls her efforts fail not.

The siege has continued for ten days. The Mexican general has received large reinforcements, and his army now numbers thousands. He has been unceasing in his efforts to batter down the walls, but has thus far failed. The triumph is with Travis; but it is written in the heart of his ruthless foe that he must die; and when the cannonade is suspended on the 6th of March, Santa Anna has determined that the hour for the assault has arrived. During ten days a blood-red flag has been streaming from the spire of the church in San Antonio, proclaiming that no quarter is to be given to the champions of the Alamo—that blood alone will appease the fury of Mexican malice. When the sun again goes down, the flag is no longer seen, for the deed of which it was the sign has been accomplished.

It is midnight. Stars are smiling in the firmament, and the repose of Paradise seems hovering over the armed hosts, and hills, and plains which encircle the Alamo. A low murmur rises upon the air,

which gradually becomes more and more distinct. Lights move to and fro in the distance, and indicate some unusual movement. The besieging army is in motion. There is no advance by columns. The force of the Mexicans is so great, that the fort may be surrounded, leaving intervals only for the fire of artillery. The place is girdled by a deep line of infantry, and these are hemmed in and surrounded by another of cavalry. If the first shrink, they must be thrust forward to the assault by the sabres and pistols of their comrades. Suddenly the batteries are in a blaze, and from their concentric positions pour forth radii of fire pointing to a single centre. Amid the thunders thus created, their own shouts scarcely less terrible, and the blasts of bugles, the Mexicans advance to the Alamo. A sheet of flame from rifles that never failed is the answer to the charge. The infantry recoil and fall back upon the cavalry; their ranks broken and disordered by the deadly fire of the besieged. The shouts from the fort are mingled with the groans of the dying on the plain, while the officers are endeavoring to reform their scattered masses. They return to the attack, but the leaden shower which they encounter fells them to the earth by platoons. Travis shows himself on the walls, cheering on his undaunted followers. Around him are Crockett, Evans, and Bonham, roused to a last struggle, for they know that their doom is sealed. In quick succession, rifle after rifle is discharged, sending hundreds to their long account. The Mexicans are again repulsed; they fall back disheartened by the dead and the dying around them. The battalion of Toluca, the flower of the Mexican army, is reduced from fourteen hundred to twenty-three. Men have become for a moment regardless of their officers and are almost delirious, from the cries of anguish which no discipline can restrain, and which come from their fallen and expiring comrades. But a breach is made at last; the disjointed forces, by the aid of threats and entreaties are rallied, and once more turn their faces to the Alamo. The firing in that quarter has for some time been growing slower and slower. Rifles have dropped from many a vigorous hand, now cold in death, while others cling to their weapons even in the agonies of dissolution. Ammunition, too, has been failing; one by one the muzzles drop; the last rifle is loaded and discharged, and the Mexicans have gained the wall. Proudly conspicuous in that awful moment, Travis receives a shot, staggers, and falls. He dies not unavenged. A Mexican officer rushes upon him, and is about to plunge his sabre into the bosom of the fallen man, when, gathering all his energies for a last effort, he bathes his own sword in the blood of his enemy, and they die together.

In the mean time the battle has been raging hot and thick. The Mexicans have poured into the citadel, like leaves falling before the storms of autumn. The conflict becomes hand to hand. Each man struggles with his adversary, dealing blows with rifles, sabres, or whatever missile may be within reach. The Texans are almost buried beneath the numbers of their opponents. The carnage has been so terrible that the slain are piled up in heaps. Death stares each survivor in the face, but still he struggles on. Crockett has been conspicuous in the mêlée, wherever the blows fell hottest and thickest. He has forced his way over piles of the dead bodies of his enemies, and has reached the door of the chapel. Here he determines to make his last stand. At one glance of his eye, he sees that the fate of the Alamo rests upon himself alone. Travis has

fallen; Evans is no more; Bowie expires upon a bed of sickness, pierced to the heart by a Mexican bayonet; Bonham falls before his eyes, and he finds himself the only living warrior of the one hundred and sixty-three who had been his comrades. Perhaps at that moment the life-blood creeps to his heart by a natural impulse, but it is only for a moment. His foes glare on him with the fierceness of demons, and assault him with blows from sabres, muskets, and pistols. The strength of a hundred men seems concentrated in his single arm, as he deals out death to his rancorous and unsparing assailants. Their bodies have grown into a rampart before him. Blackened with fire and smoke, besmeared with blood, and roused into phrenzy, he stands, like some fabled god of antiquity, laughing to scorn the malice, and the power, and the fury of his enemies. New fire flashes from his eye, and new vigor nerves his arm. On his assailants rush, but it is only upon certain death. They fall, but their places are still supplied; and so quickly, the dead seemed to rise up before him, like armed men from the teeth of Cadmus. At length a ball from a distant rifle pierces him in the forehead: he falls backward to the earth, in the streams of gore which curdle around him. No groan escapes his lips; no cry of agony gratifies the implacable rancor of his enemies: he dies, and the Alamo has fallen.

K.

**BATS AND FIELD MICE.**—"I was much entertained last summer with a tame bat, which would take flies out of a person's hand. If you gave it anything to eat, it brought its wings round before the mouth, hovering and hiding its head in the manner of birds of prey when they feed. The adroitness it showed in shearing off the wings of the flies, which were always rejected, was worthy of observation, and pleased me much. Insects seemed to be most acceptable, though it did not refuse raw flesh when offered; so that the notion that bats go down chimneys and gnaw men's bacon, seems no improbable story. While I amused myself with this wonderful quadruped, I saw it several times confute the vulgar opinion that bats, when down on a flat surface, cannot get on the wing again, by rising with great ease from the floor. It ran, I observed, with more despatch than I was aware of, but in a most ridiculous and grotesque manner."

One day, in walking in the fields, he sees a mouse of a remarkable species, which attracts his attention. It was the *Mus messorius*; and making inquiries into the habits of this pretty little creature, he writes as follows to Pennant on the subject:—"These mice never enter into houses, are carried into ricks and barns with the sheaves, abound in harvest, and build their nests amidst the straws of the corn above the ground, and sometimes in thistles. They breed as many as eight at a litter, in a little round nest composed of the blades of grass or wheat. One of these nests I procured this autumn, most artificially platted, and composed of the blades of wheat; perfectly round, and about the size of a cricket-ball; with the aperture so ingeniously closed, that there was no discovering to what part it belonged. It was so compact and well filled, that it would roll across the table without being discomposed, though it contained eight little mice that were naked and blind. As this nest was perfectly full, how could the dam come at her litter respectively, so as to administer a teat to each? Perhaps she opens different places for that purpose,

adjusting them again when the business is over; but she could not possibly be contained herself in the ball with her young, which, moreover would be daily increasing in bulk. This wonderful procreant cradle, and elegant instance of the efforts of instinct, was found in a wheat-field, suspended in the head of a thistle." Recurring afterwards to these mice, he says, "Two of them, in a scale, weighed down just one copper halfpenny, which is about the third of an ounce avoirdupois, so that I suppose they are the smallest quadrupeds in this island."—*White, of Selborne.*

## NOT TO MYSELF ALONE.

"Not to myself alone,"

The little opening flower transported cries—

"Not to myself alone I bud and bloom;

With fragrant breath the breezes I perfume,  
And gladden all things with my rainbow dyes:

The bee comes sipping, every eventide,  
His dainty fill;

The butterfly within my cup doth hide  
From threatening ill."

"Not to myself alone,"

The circling star with honest pride doth boast—

"Not to myself alone I rise and set;

I write upon night's coronal of jet

His power and skill who formed our myriad host:

A friendly beacon at heaven's open gate,

I gem the sky,

That man might ne'er forget, in every fate,  
His home on high."

"Not to myself alone,"

The heavy-laden bee doth murmuring hum—

"Not to myself alone from flower to flower

I rove the wood, the garden and the bowyer,

And to the hive at evening weary come:

For man, for man the luscious food I pile

With busy care,

Content if this repay my ceaseless toil—  
A scanty share."

"Not to myself alone,"

The soaring bird with lusty pinion sings—

"Not to myself alone I raise the song:

I cheer the drooping with my warbling tongue,

And bear the mourner on my viewless wings;

I bid the hymnless churl my anthem learn,

And God adore;

I call the worldling from his dross to turn,  
And sing and soar."

"Not to myself alone,"

The streamlet whispers on its pebbly way—

"Not to myself alone I sparkling glide:

I scatter life and health on every side,

And strew the fields with herb and flow'et gay;

I sing unto the common, bleak and bare,

My gladsome tune;

I sweeten and refresh the languid air  
In droughty June."

"Not to myself alone"—

Oh man, forget not thou, earth's honored priest!

Its tongue, its soul, its life, its pulse, its heart—

In earth's great chorus to sustain thy part.

Chiefest of guests at love's ungrudging feast,

Play not the niggard, spurn thy native clod,

And self disown;

Live to thy neighbor, live unto thy God,

Not to thyself alone.

*Chambers' Journal.*



From the Spectator.

*Hochelaga; or England in the New World.* Edited by ELIOT WARBURTON, Esq., author of "The Crescent and the Cross." In two volumes. Colburn.\*

HOCHELAGA is said to have been the ancient name of Canada; and these volumes contain an account of a visit to that country, some rambles in the United States, with a notice of the outward and homeward voyage, mixed with a variety of miscellaneous subjects springing naturally out of the field of observation. The celebrated and successful author of *The Crescent and the Cross*, Mr. Warburton, professes to be only the editor of the volumes, who vouches for the "tone and truth." The work, however, is exceedingly Warburtonian, not only in its manner but its treatment. The smart and pointed vivacity of style is the same as in *The Crescent and the Cross*; there is the same disposition to rapid and rhetorical compilation touching the history and statistics of every place the traveller comes to, and a something of heaviness in the march of the book, in spite of all the excellences of composition.

But a greater interest, and perhaps more of freshness in the subject, renders *Hochelaga* a better book than its predecessor. The Mediterranean, Egypt, and Syria, do not receive so many people as North America, but they are visited by more professional travellers; they have been more thoroughly examined and exhausted; and, after all, the interest is rather of the dead or dying than of the living. The remains of Grecian and Roman antiquity are but the skeletons of what were once animated creatures: the Crescent appears in a state of decrepitude, and the revival of the Cross is too remote for any credence save that of the enthusiastic. But all is different in the New World. It may not be quite true that "Westward the scene of empire bends its way," but there, without doubt, are new modes of political being rising into vigorous life, and not merely exciting the most careless passenger by the rapidity with which society wins upon the wilderness, and surpasses all that panegyric poetry could exaggerate of imperial power, but furnishing to the thoughtful observer some of the most singular elements in politics—for Canada and the other British settlements are quite as curious in their way as the United States. They are not, indeed, so far advanced, and perhaps the elements in them are somewhat different; but there are the possible germs of a counterbalance to the fierce democracy to the south of them, which it would be well to understand and better to cultivate.

A perfect traveller, who should combine the wisdom and observation of the philosopher with the graces of the literary artist, will be vainly waited for. We must obtain our notions of a country by means of a division of labor, one man taking one part, another man another. In this point of view, it is well to have the pictures of Mr. Warburton or his "alter idem." The reader who is extensively acquainted with books of travels may meet much that he has met before—as the predominance of fish at Newfoundland, the beauties of the American foliage in autumn, winter travelling in Canada, and perhaps nearly all the broad and obvious features of scenery and manners which every one must notice. But they are mostly better done in

*Hochelaga*, with more of point, pith, and condensation; and where the subject is worth an additional view—as Niagara—the picture is desirable on this ground. The summaries of such things as the now settled Oregon question, the exposition of the American constitution, or the history of Canada, had indeed been better away, because, however able, they are jejune from the space into which they are compressed, and are little more than well-executed compendiums for a gazetteer.

The remarkable parts of the book are those which contain the author's narrative of such incidents as occurred to himself or fell under his immediate observation, or his remarks on men, manners, and the state of the country. These are often of interest in themselves, full of matter, and with much of freshness; but the most remarkable characteristic is the way in which the author brings out the text of his subjects, by his pointed and impressive mode of presenting their striking traits. This is perhaps as much a knack of writing as a thorough appreciation of the qualities of things; but, if an artifice, it is often very effective. Thus, he brings out by a touch the fine but inappropriate names and slender buildings of the newly-settled districts. "At each seven or eight miles of distance are thriving villages, built with the solidity and rapidity of the city of the pack of cards, and all named by Mrs. Malaprop—Rome is situated in a valley, and looks as if it had been built in a day."

The American part of the tour has not only the greatest interest for the reader from the nature of its subjects, but we think the strong contrasts and strange peculiarities of that fervid nation are better suited to the writer's style than the quieter and more English society of Canada. His character, too, qualifies him to judge. A gentleman acquainted with good society in many countries, and having evidently access to it in America, he has the tolerance of a gentleman, with the power of a man of the world to draw distinctions: and his conclusions coincide with those we have more than once advanced touching manners and morals in America. There are many persons of the finest feeling and of the highest sense of honor, though the last quality is too often tainted by the "auri sacra fames;" but the majority predominates in everything—not only in political power, but in giving the tone to manners and opinions. America, in fact, is deprived of the use of the services and example of her best citizens, and has recourse to those of her worst.

The various topics, and the writer's mode of treating them, are, after all, better shown by extracts than description; and for this purpose we will draw pretty freely upon *Hochelaga*.

#### AMERICAN TRAITS.

"Our primitive railway carried us again to Queenston: we pass over the ferry to Lewiston, and are soon on board an American steamer bound for Oswego, in the United States, on the south shore of Lake Ontario. There were a great number of people in the steamer, all Americans, travelling for health or amusement. I talked to every one I could get to listen to me, and found them courteous, intelligent, and communicative; well read over a very broad surface, particularly of newspapers, but only a surface; very favorably disposed to the English as individuals, but I fear not so as a nation; rather given to generalize on our affairs—on the state of the poor, from the Andover work-house—on the nobility, from the late A. Hert-

\* Re-published in New York by Wiley & Putnam.

ford—on morality, from Dr. Lardner. These are the sort of data on such matters kept forever before their eyes by their press, echoed and reëchoed through the remotest parts of the Union, till even the best-informed and most liberal-minded among them are, more or less, acted upon by their influence.

"Utica is a large and flourishing town, or city as they love to call it. Through all these districts the stranger is astonished at the appearance of prosperity in every place and person; he sees no bad or even small houses, no poor or idle people; every place of business, transit, or amusement, is always full; lecture-rooms, railway-cars, theatres, hotels, banks, markets, crowded to bursting. There is something infectious in this fever of activity; and I soon found myself rushing in and out of railway dépôts and dining-rooms just as fast as any one else.

"Our ideas of their perfect equality are just as much exaggerated as theirs are of our tyranny of class; servants generally are called servants, and address their superiors as 'sir' and 'ma'am'; porters, cab-drivers, and all those classes of functionaries the same. I think there is very little difference between their manners and those which we are accustomed to; and they are quite as civil and obliging."

#### WAITERS' IDEAS OF LORDS.

"We found a very good hotel there, where we slept comfortably without any dreams of the Indians. I found in the morning I had indulged too much to be in time for the regular breakfast; but there was a side-table laid in the corner, where one or two stragglers from the town and I seated ourselves; one of the waiters having put on the table what was necessary for his and our use during the meal, sat down himself also, and entered into conversation with us. He spoke quite freely, but at the same time respectfully—his manner was very proper. I talked to him a good deal; on many points he seemed wonderfully well-informed for a man in his situation. Some of his notions of England were rather amusing. He understood that it was quite an usual thing for an English lord, when in a bad humor, to horsewhip his servants all round, particularly on a day when his gun had failed to kill a sufficient number of foxes. Perhaps you may think the ideas of a waiter at a country inn not worth being printed; I think they are, in a land where his share of the government is as great as that of a doctor of laws or a millionaire.

"My Georgian friends expressed much surprise when they heard the waiter had been my companion at breakfast; but I have seen similar cases in several instances: the horsewhipping notion did not astonish them in the least."

#### WOOLWICH, WEST POINT, AND AMERICAN OFFICERS.

"At Woolwich, everything is trusted to the honor of the cadet: his punishment is an arrest by the word of his officer; no one watches that he keeps it. Often for a week together he is confined to his room for some boyish freak, looking at his companions playing at cricket or football outside, and longing to join them; but he is shut in by something far more effectual than bolts or bars—by his honor; whatever other rules he may violate, to break that is unknown. Again, when an irregularity is committed, and the offender cannot be identified, the officer asks for him on parade; the culprit instantly follows, and says 'I did it,' and

is punished accordingly. To establish a system of this sort among boys, formerly from fourteen, now from fifteen years of age upwards, is a very delicate and difficult matter; but when accomplished, it is invaluable; the boy must be thoroughly corrupt who does not imbibe a spirit of truth and honesty under its influence. It teaches to love what is great and good, and hate all that is false, or mean, or cruel.

"At West Point, to establish a system like this would be almost impossible. An officer of the institution told me, that sometimes boys arrived at the college utterly ignorant of everything, especially of the difference between right and wrong: they find it more difficult to qualify many of their pupils in matters of honor and principle than in mathematics and fortification. The appointment of the cadets rests with members of congress, each having one: in spite of this, and of its being of such essential consequence to their army, there is every year the bitterest opposition to the rate for the expenses of the college. A great ground of jealousy is, that there is a decidedly aristocratical feeling among the officers of the army. I have had the pleasure of knowing many: America may well be proud of them; they are highly educated and gentlemanly, upright and honorable, zealous and efficient in their profession; with the greatest pleasure I bear witness that I have met with no exceptions. They are a most valuable class as citizens; and their high tone of feeling and good manners are not without an influence on society. They at least are clear of the eternal struggle for gain, and have leisure and taste for cultivating the graces of life. The enemies of America may rejoice when the institution of West Point is abandoned by the government."

#### THE RANK AND FILE.

"I cannot speak so favorably of the rank and file of the army; one third of them are Irish and Germans of the very lowest class. Although their term of enlistment is only for three or five years, thirty in a hundred desert annually. Their pay is about a shilling a day above the cost of their clothing and living. The uniform is not calculated to show them off to advantage: their performance under arms is very inferior—at drill only I mean, for it is known that they can fight very well. Their barracks are generally much better than those of our troops. At first sight it appears strange, that when the officers are so very good the private soldiers should be so much the reverse; but the evil of the short period of service, rendered greater by desertion, and by their discontent at being worse off than their civilian fellow-citizens, makes them but indifferent matériel. They are not regarded in a very kindly or respectful light by the lower classes of the people. It seems an instinct of the Anglo-Saxon race to dislike regular soldiers, though they themselves make such good ones; perhaps it is from the military being associated in their ideas with despotic power."

#### INTRODUCTION TO PRESIDENT POLK.

"There was no public reception during my very short stay, but I had the honor of being presented to the President. At eleven in the forenoon we arrived at the White House, under the shade of our umbrellas; from the intense heat, a fire-king alone could have dispensed with this protection. It is a handsome building, of about the same size and pretensions as the lord-lieutenant's residence

in the Phoenix Park in Dublin; but, much as I had heard of the republican simplicity of the arrangements, I was not prepared to find it what it was. We entered without ringing at the door: my kind guide, leading the way, passed through the lower premises, and ascended the staircase; at the top of which we saw a negro, dressed very plainly, in clothes of the same color as his face. He grinned at us for a moment; and, calculating from the respectability of my companion that I did not mean to steal anything, was walking off, till he saw me, with a simple confidence which seemed to him too amiable to be allowed to suffer a betrayal, place my umbrella in a corner before entering the gallery leading to the private apartments: he immediately turned to correct my error, informing me that if I had any further occasion for its services I had better not leave it there, 'for some one would be sure to walk into it.' I of course took his counsel and my property, and proceeded till we arrived at the door of the President's room. My guide knocked, and the voice of the ruler of millions said 'Come in.' Before obeying this command, I of course left my unfortunate umbrella outside: this done, I walked into the presence, and was introduced. At the same moment, the watchful negro, the guardian spirit of my endangered property, thrust it into my left hand, with another and stronger admonition to my simplicity; but this time his tone of compassion for my ignorance had degenerated into that of almost contempt for my obstinate folly. In the mean time, my right hand was kindly shaken by the President, according to custom: he told me to be seated, and conversed with much urbanity. I, of course, trespassed on his valuable time but for a very few minutes, and then departed.

"He was sitting at a round table covered with papers; another gentleman, I presume a secretary, was seated at a desk near the window, writing. Mr. Polk is a remarkable-looking man; his forehead massive and prominent, his features marked and of good outline. The face was shaved quite close, the hair short, erect, and rather grey. Judging from his dress and general appearance, he might have been either a lawyer or a dissenting minister; his manner and mode of expression were not incongruous with his appearance."

#### MIDDLE-AGED AND MELANCHOLY AMERICA.

"In the number of my fellow passengers there were neither old nor young, at least there were no venerable grey heads or cheerful boyish faces. In no part of the United States do the people seem to arrive at the average length of life of the Old World. The great and sudden changes of temperature, while perhaps they stimulate the energies of those who are exposed to them, wear out the stamina of the body and exhaust its vitality. The cares of manhood and the infirmities of second childhood are equally premature, denying the population the two loveliest but most dependent stages of existence, the idle but fresh and generous morning of youth, the feeble but soft and soothing evening of old age. In this country, we find even the climate in league with the practical in its influences on the powers of man, a goad to material prosperity. The child is pushed with a forcing power into the duties and pursuits of maturer years; the man, when he ceases to be of active use, is hurried out of the busy scene, his part played. The cumberers of the ground are but few; all work, none play. They go more awkwardly about their amusements than any people I have ever seen else-

where; theirs is a dark and sombre path through life, though every step were on gold. Sarcastic wit will win from them a sarcastic grin; the happy conclusion of some hard-driven bargain may raise a smile of satisfaction; but the joyful burst of cheerful laughter, the glee and hilarity of a happy heart, you must go elsewhere to seek. They are not a healthy-looking race; the countenance is sallow, and marked early in life with lines of thought. The fresh pure glow of the Saxon cheek is never seen here. The men are tall, but not robust or athletic: they have no idea of the sports of the field, and rarely or never join in any more active game than bowls or billiards. They do not walk, if they can ride; ride, if they can drive; or drive, if they can go by railway. Mind and body, day and night, youth and age, are given up to the one great pursuit of gain. But this inordinate appetite for acquiring is in their character deprived of some of its most odious features; it is rarely accompanied by parsimony or want of charity. I believe no people on earth can be more hospitable to their equals in worldly wealth, or more open-handed to the poor."

#### MANNERS IN CANADA.

"The manner of servants to their masters, and of the lower classes generally to their superiors, is much the same as in England; tradespeople, too, hold a like relative position. Your bootmaker does not consider that it adds to his importance or real independence to sit down in your room with his hat on, and whistle and spit while he takes your measure, as his republican brethren in the United States would probably do. I made a small purchase from a man in a shop at Baltimore, who was smoking a cigar, chewing tobacco, and eating a peach, at the same time: with so many pleasing and interesting occupations, he of course had not much leisure to spare for civilities to his customer."

"With the exception of a few of the lowest class, the Canadians are quite free from those very disagreeable habits which are so unpleasantly general among the Americans. Chewing tobacco is not the fashion, and they reserve their saliva for other purposes than those of a projectile nature. Their manners, customs, and dress, are those of England, not of America; and in this there is a bond of union and sympathy, of which all astute politicians acknowledge the strength and value."

#### EDUCATION IN AMERICA.

"The people of New England are, without doubt, very generally educated: rich and poor, indeed, have apparently the same opportunities, but practically they are different. The poor man's son has to lay aside his books for the axe or the plough, as soon as his sinews are tough enough for the work; the rich man's has more leisure to pursue his studies and complete them afterwards. However, he has but little to gain by eminence. The pursuit of wealth offers a readier course to distinction; he meets here with numbers who have like objects, and whose conversation and habits of life are formed by them. The man who labors to be learned condemns himself to a sort of isolation: however precious the object may be to him, it is not current as value to others. Some there are whose love for knowledge is for itself alone, not for the honors and advantages derivable from it; these few conquer the great difficulties in the way and become really learned: but the tendency is to



acquire as much information as may be absolutely necessary; then to set to work to apply it, and make it profitable for other purposes, but not to increase itself. Consequently, the greater part of the national mind is but a dead level, like the prairies; rich and productive immediately round about the spot where it is worked for the uses of life, but with few elevations from which any wide or commanding view can be taken in the search for yet more fertile soil.

This equality of education tells very well in enabling men to fulfil with propriety very different social positions from those in which they were born. The blacksmith who has made a fortune has only to wash his hands; and he does not find his new associates either so very highly cultivated, or himself so much the reverse, as to place him in an uncomfortable situation. For general utility to the state, for the practical affairs of life, and for forcing men up to the almost universal level of intelligence, the democratic power has made admirable arrangements; but to go beyond that it has thrown almost insurmountable difficulties in the way, not by its laws, but by the habits which its laws engender.

Some passages towards the close treat of American subjects generally—as education, manners, character, the prospect of the Union continuing; and are well worth perusal for their shrewdness of remark and vigor of style, though we may not always agree with the writer's conclusion. In course of time, he thinks, the United States will eventually break up into three communities—north-eastern, southern, and western. Such is the result to be predicated from natural circumstances, and society as controlled by them; but the author of this work seems to think the dissolution will take place in the usual course of progress, by the internal divisions it will cause. Of this we doubt. Should the valley of the Mississippi, the territories of Oregon and California, with the northern parts of Mexico, be completely occupied, an empire so unwieldy and with such diverse characters and interests *must* divide; but force throughout nature seems a necessary element of change. Summer and winter depart with the equinoctial gales; growing heat is got rid of by a storm; and the pent-up gases in the work-shops of the earth vent themselves in volcanoes. Organic changes in a state are rarely brought about without violence; and something that irritates men's minds to a pitch in which habit and feeling are alike overborne seems necessary to break up "the Union." This necessity is most likely to arise in a war, where the Atlantic States, suffering all the direct evils and paying all the expenses, will get so angry as to withdraw themselves from the western belligerents, for the sake of peace. Had a war taken place on the Oregon question, this separation would possibly have been precipitated.

From the Spectator.

#### JENYNS' OBSERVATIONS IN NATURAL HISTORY.

MR. JENYNS appears to be one of those active, observing, and recording men, that form the commissariat of science; collecting the materials from which more theoretical, and it may sometimes happen more philosophical minds, frame an hypothesis, generalize a view, or deduce a principle. The qualities and labors of this class vary, from the mere drudge, whose mind runs upon the dry arith-

metic of measurements and similar tangible "facts," to the earnest and truthful observer of nature, who feels her charms if he cannot extract her poetry. Such was Gilbert White, and such in a lesser degree is the Reverend Leonard Jenyns.

In fact, these *Observations in Natural History* originated in the author's admiration of White's *Natural History of Selborne*; their nucleus having been formed as illustrative notes to a new edition of that work which Mr. Jenyns was preparing. The stock of matter accumulated was, however, too much to use as mere addenda, and first gave rise to the idea of this publication. Then the "Naturalist's Calendar" of White seemed to Mr. Jenyns deficient in several particulars, and he considered one might be formed upon a more exact and methodical plan. He also thought that he was competent to give some advice on Habits of Observing to the country resident, who might wish to avail himself of his opportunities, and acquire a relish for nature whilst he accumulated facts for his own use or the advance of science.

In some sense, therefore, the book may be considered a species of companion to *White's Selborne*; and, to speak of its formal divisions, and in the order of their occurrence, it consists of three parts. The first is the essay on the Habit of Observing, which contains a good deal of judicious advice to the reader, both as to his manner of proceeding to study nature and as to the uses to which his studies may be turned; though the style occasionally smacks of the spiritual rather than of the literary director. The second part is the largest and most popular; and contains the Observations in *Natural History*, classed under the heads of quadrupeds, birds, reptiles, fishes, and the lesser tribes of animantia. The third part is an essay on the importance of forming a calendar of periodic phenomena in natural history—a statistical table of dates and events kept yearly, and the extremes deduced from a series of years. The uses to which these collections may be turned, and the principles on which the observations should be made and recorded, form the subject of the text; which is followed by an example in Mr. Jenyns' own calendar.

The Observations are various both in character and extent; sometimes embracing a single fact, of a small and to general readers an unimportant kind, sometimes handling a particular subject, and well illustrating it by anecdotes. On the whole, however, the special predominates; which will render the book more attractive to those who open it with a purpose than to those who read for mere amusement. We give some examples of this latter kind of reading.

#### RISE AND MOVEMENT OF ANIMALS.

"The most common occurrences, and such as are brought under our eyes every day, sometimes escape the notice of inobservant persons. A farmer, who had lived all his life among stock, was not aware, till I drew his attention to the fact, that horses and oxen rise from the ground differently. There is a slight difference in their mode of lying down; the horse not generally remaining so long upon his knees as the ox, before bringing the rest of his frame to the ground. But in getting up, the horse invariably rises first upon his fore-legs, before rising upon his hind. The ox, on the contrary, rises first upon the hind, and often remains upon his knees some few seconds until his hind-legs are straightened. These differences probably prevail

throughout the two Cuvierian groups of *Pachydermata* and *Ruminantia*, to which the horse and ox respectively belong. The elephant and rhinoceros both rise first upon their fore-legs, like the horse; so does the pig: the sheep, goat, and deer, in this respect, are like the ox.

"The horse, in trotting or walking, lifts his feet off the ground in a certain order: first he raises the off fore, then the near hind, then the near fore, and lastly the off hind. The appearance, as is well known, is that of the two legs which are diagonally opposite being raised nearly simultaneously; but the two on the same side following one another at a moderate interval, the hind one advancing first. The elephant, as many observers have noticed, appears, in walking, to move the two legs on the same side at the same time; and it has occasionally been thought that the order in which the legs are raised from the ground is different from that in the horse. But, upon close watching, it will be seen that this order is in all cases the same; the only difference consisting in the length of the intervals between taking the feet successively up. In the elephant, the interval between raising each hind-foot, and the fore immediately in advance of it is very short, and it becomes relatively shorter as the pace increases. When the animal walks very slowly, the legs appear to move just as in the horse; the interval in the two cases being the same. The same may be observed in the rhinoceros; though I have had no opportunity of noticing this animal moving fast, so as to say whether it then resembles the elephant in the appearance of the legs or not. The giraffe, whether it walks fast or leisurely, appears to move the two legs on the same side together, as in the elephant."

#### A HEDGEHOG'S REFEAST.

"Oct. 28th, 1828.—Hedgehogs are still about, and on the alert for food. I fell in with one to-day in my walks, in a sheltered part of the garden, which I was enabled to watch unobserved, and which afforded me an opportunity of seeing a little into their habits and mode of feeding. It was creeping up and down a grass walk, apparently in busy search for worms. It carried its snout very low, insinuating it among the roots of the herbage, and snuffing about under the dead leaves which lay about. After a time, it commenced scratching at a particular spot, to which it seemed directed by the scent, and drew out a very large worm from just beneath the surface of the ground. This it immediately began to devour, taking it into the mouth by one extremity, and gradually eating its way to the other; an operation which lasted some time, and was attended by an incessant action of the teeth, which grated one upon another with a peculiar noise. After the worm was all gone, as I thought, I was surprised to see the whole put out of the mouth again; and, from the appearance of the cast, I was led to believe that it had been only subjected to the action of the teeth for the purpose of being bruised, and squeezing out the soft internal parts of the body, which alone were eaten in the first instance: the skin itself, however, was shortly retaken into the mouth, and the whole clean devoured."

#### MATERNAL INSTINCT AND JEALOUSY.

"It is curious to observe what slight deviations from the course which nature has prescribed for each species of animal are sometimes sufficient to

modify and even entirely overrule their instincts; at least in the case of domesticated animals, these instincts are liable to be much perverted. My cat has a kitten nearly full-grown, to which she frequently brings mice, offering them with evident symptoms of complacency, and sitting quietly by while the kitten devours them. Yet, when the family are at meals, the old cat, who has been accustomed to be fed from the table, is exceedingly jealous when the kitten approaches her at such times: she is apprehensive lest the attentions of the party should be diverted from herself to the kitten; and if the latter attempts to take any of the food which she conceives intended for herself, she growls, and flies at her offspring in the most savage manner. This has nothing to do with any feelings of hunger; for she is often manifestly hungry when she has caught a mouse, but which, notwithstanding, she gives up to the kitten."

#### BIRDS TUNING UP.

"Birds which are silent during the winter, as most are, appear to acquire their notes in the spring by degrees. At first their song is very weak and imperfect; and to hear them laboring at it, and only managing to get a part out, conveys the idea of some physical impediment, which for a while they are unable to surmount. As the temperature of the season advances, their system receives a corresponding stimulus, and their song becomes louder and more lengthened. This may be particularly noticed in the chaffinch, and those birds whose song is generally made up of a definite number of notes. I have also observed it in the ring-dove, whose cooing note with us, in the height of the summer, is invariably repeated five times to complete the usual call; but in January and February, when these birds are only induced, perhaps by a mild day, just to try their powers, I have sometimes heard them as if obliged to stop after the second or third coo."

"Birds also appear to lose their song in the same gradual way in which they first acquire it. This has been often remarked in the case of the cuckoo, which towards the end of June is sometimes only master of the first syllable of its call."

#### AN OWL OF TASTE.

"One of the most striking peculiarities in this tame owl is said to have been its fondness for music. It would often come into the drawingroom of an evening, on the shoulder of one of the children; and, on hearing the tones of the piano, would sit with his eyes gravely fixed on the instrument, and its head on one side in an attitude of attention: when, suddenly spreading his wings, he would alight on the keys, and making a dart at the performer's fingers with its beak, would continue hopping about, as if pleased with the execution."

#### PUGNACITY OF THE ROBIN.

"The pugnacious disposition of the redbreast towards its own kind, as well as towards other birds, is well known. Mr. Selby sends me the following remarkable anecdote, showing to what an extent their passion will sometimes carry them, and how completely they are lost to all apprehensions of danger while under its influence. A redbreast had for sometime taken up its abode in a hot-house, from which it had egress at pleasure. One day, when the gardener was in the house, another redbreast found his way in; but he had no sooner made his appearance than he was ferociously attacked

by the usual tenant, and soon showed that he had the worst of the combat: so severely was he treated, that he was taken up by the gardener, and held in his hand, where he lay struggling and panting for breath. The victor, however, was not thus to be deterred from further wreaking his vengeance upon the intruder. He boldly flew and alighted upon the hand of the gardener; and forthwith proceeded to peck the head of his victim, and buffet him in such a manner that he would soon have put him hors de combat, had not the gardener carried him out, and turned him off at some distance from the building."

**BURNING OF WATER.**—It was once remarked by a celebrated chemist, when speaking of the probable exhaustion of our coal-fields, that he had little fear for that event, as long ere then the progress of science would have enabled man to support the combustion of water. Extravagant as this opinion may appear to the unscientific, there is nothing more likely. Water is a compound of oxygen and hydrogen—two gases without which it would be impossible to eliminate a single phenomenon of combustion. Thus the gas which we burn in our houses is carburetted hydrogen; that is, a compound of carbon and hydrogen, which, on ignition, gives us light and heat only when in a medium containing oxygen—such as the atmosphere. Here, then, hydrogen and oxygen play most important parts; and could we resolve water into its elements, which it is quite possible to do, all that is necessary to produce heat and light is a little carbon. But we are not left to speculate on this matter; the thing has been so far done by M. Jobard; and gas made from water, possessing double the illuminating properties of ordinary coal gas, has been used both in France and in our own country. M. Jobard obtains his hydrogen gas by the decomposition of steam in vertical retorts filled with incandescent coke, and unites this gas, at the moment of formation, with hyper-carburetted gas, produced by the distillation of any hydro-carburet—as oil, tar, naphthaline, and other products at present rejected by our ordinary gas-works. It is of no moment whence his hydro-carburets are produced; indeed, the substances which are rendered useless and injurious to the manufacture of the gas, by the present mode of operating, are precisely those which are the richest in illuminating properties. M. Jobard's process and its details have been submitted, since its invention in 1833, to several commissions of inquiry both in Belgium and France, and the reports of these have been uniformly favorable both as to its cheapness and the higher illuminating power of the gas so produced. In a recent number of the "Bulletin du Musée d'Industrie," the inventor gives a full account of his process, which is about to become public property; and mentions that it has been used in a manufactory near St. Etienne, in Dijon and Strasburg, partially in Lyons and Paris, and by private individuals in Dublin and London. He modestly concludes his paper by observing, that he will not be accused of exaggeration when he states "that there is some value in a process, the principle of which is to decompose water, a substance of no value, by means of coke, which is of very little value—as under this process one pound of oil, which costs a halfpenny, will supply a burner giving a light equal to ten candles during twenty hours."

M. Jobard's is certainly a discovery of great

interest, and though not the complete combustion of water predicted by Sir Humphry Davy, is at all events, as every one must admit, an important step in the right direction.—*Chambers' Journal.*

#### THE "GOVERNMENT CLASS" AT SYDNEY.—

"It may be worth while here, suppressing names and dates, to give an instance of the feeling which exists among what are called the 'free,' in opposition to the 'government' classes, now emancipated, and possessing the same political rights and privileges with the others. Several attempts have been made to conclude a treaty of alliance between them, but in vain. All endeavors hitherto have failed before the invincible prejudices of hereditary virtue; and there seems every possibility of the permanent existence of a class which thanks God it is not as its neighbors are—sons and daughters of publicans and sinners. The prejudices entertained against the black natives have been partially overcome, by a matrimonial alliance at Swan River. It was thought, therefore, that if a marriage between persons of a distinguished position, one of them being of convict descent, were brought about, a great step would have been taken. A couple answering this description existed. The accomplished and beautiful daughter of a man of wealth, who had been one of the compulsory founders of the state, was betrothed to a young man glorying in all the pride of honest blood. The marriage took place; the bride was given away by the governor of the colony. The public looked on in seeming approval; and as soon as the reluctance of the young wife to appear in public was overcome, she entered, leaning on the arm of her husband, a ball-room filled with all the rank and fashion of Sydney. A titter ran round; there was shaking of fans, and rustling of gowns, and exchanging of glances, and tossing of heads, and whisperings. Suddenly every kind and charitable lady rose from her seat, the dance was broken up, and in a few minutes all the rank and fashion of Sydney had disappeared; and even the hostess, who had magnanimously issued the invitation, awed by this expression of public opinion, dared scarcely advance to console the confounded and weeping cause of all this confusion!"

"Another instance will exhibit the state of feeling among the reprobates themselves. They have been taught to caricature the feelings of the free. Because these will not associate with the descendants of rogues, those will not associate with any who are not descendants of rogues. A public dinner was given by this class, to which the doctor who took care of their bodily health was invited. Great was the joviality among these sinners, and toasts of all kinds were drunk. Our medical friend got on his legs, to answer for his profession; when suddenly a man arose, whose claims to Newgate descent were undoubted, and insisted that, because the son of *Æsculapius* was a *white sheep*, he could not be heard. No sooner was this hint given, than divers significant glances were cast on the worthy doctor, who stood almost overwhelmed by the imputation. At length, mustering courage, he repelled the charge 'of his honorable friend,' denied the purity of his descent, and, for fear of falling a victim to the 'exclusive dealing' system, actually proved, by a long genealogical deduction, his relationship with some notorious convicts."—*Foreign Quarterly Review.*



**SLIGHT CIRCUMSTANCES.**—Sir Walter Scott, walking one day along the banks of the Yarrow, where Mungo Park was born, saw the traveller throwing stones into the water, and anxiously watching the bubbles that succeeded. Scott inquired the object of his occupation. "I was thinking," answered Park, "how often I had thus tried to sound the rivers in Africa, by calculating how long a time had elapsed before the bubbles rose to the surface." It was a slight circumstance, but the traveller's safety frequently depended upon it. In a watch, the mainspring forms a small portion of the works, but it impels and governs the whole. So it is in the machinery of human life—a slight circumstance is permitted by the Divine Ruler to derange or to alter it: a giant falls by a pebble; a girl at the door of an inn changes the fortune of an empire. If the nose of Cleopatra had been shorter, said Pascal in his epigrammatic and brilliant manner, the condition of the world would have been different. The Mohammedans have a tradition, that when their prophet concealed himself in Mount Shur, his pursuers were deceived by a spider's web, which covered the mouth of the cave. Luther might have been a lawyer, had his friend and companion escaped the thunder storm at Erfurt; Scotland had wanted her stern reformer, if the appeal of the preacher had not startled him in the chapel of St. Andrew's castle; and if Mr. Grenville had not carried, in 1746, his memorable resolution as to the expediency of charging "certain stamp duties" on the plantations in America, the western world might still have bowed to the British sceptre. Cowley might never have been a poet, if he had not found the Faery Queen in his mother's parlor; Opie might have perished in mute obscurity, if he had not looked over the shoulder of his young companion, Mark Oates, while he was drawing a butterfly; Giotto, one of the early Florentine painters, might have continued a rude shepherd-boy, if a sheep drawn by him upon a stone had not attracted the notice of Cimabue as he went that way.—*Asiatic Journal*.

**MICE IN GERMANY.**—A plague peculiar to the dry districts along the Rhine is found in the mice, which, in a fine season, swarm in such myriads, that whole fields are devastated where no energetic means are adopted for destroying them. It is true that the winter frosts and spring floods cleanse the fields, to all appearance, thoroughly of this nuisance; yet, if the month of May be fine, they appear in August with undiminished force. In various villages, the remedies attempted are different. Sometimes a reward in money is offered per one hundred skins, and the youthful population is encouraged to exert its skill and passion for the chase on the modern hydra. All such efforts prove, however, ineffectual to keep down the numbers of the general foe, whose paths across a cornfield are nearly as broad as those trodden by single foot-passengers, while the hoard abstracted from his crop is estimated by the farmer from the number of straws nibbled off at a short distance from the ground, the ears from which have disappeared within the subterranean labyrinths, that often repay the labor of digging up. In the neighborhood of Jülich a mode of smoking out the mice has been introduced from Belgium. An iron pan, two feet high, has at bottom a grating supported by a pin. On the grating some charcoal is laid, and the pan, when filled with rags, leather, and sul-

phur, is fastened with an air-tight cover, which has a small tube, into which a small hose, connected with a bellows, is inserted. The pan is held by an upper and a side handle. The night before it is used the field is surveyed, and all open mouse-holes are trodden close. In the morning, such as are reopened indicate those which are tenanted, and one being selected, the lower part of the pan is pressed against it, and the bellows being set to work, the smoke issues from the orifice near the grating, and penetrates into the runs and galleries that connect the holes. A number of assistants are required to tread the crevices close through which the smoke is seen to escape; and if all due precautions be taken, great numbers of these diminutive enemies may be slaughtered, and at the same time buried, in their subterranean holds.—*Banfield's Industry of the Rhine*.

**WE MUST INVADE IRELAND.**—Ireland was Peel's difficulty: he said so. Ireland will be Russell's difficulty. She will be the difficulty of everybody who shall attempt to govern her peaceably: she is becoming even a difficulty to O'Connell; thanks—small thanks—to Mr. Smith O'Brien.

The fact is, as we have heard many respectable old gentlemen declare, that Ireland is not yet conquered; and conquered she must be. We therefore plainly and plumply, without mincing the matter, recommend an invasion of Ireland.

Not from the vain wish to parade our skill in strategy, but from motives of the purest patriotism, do we propose the following arrangement of the invading forces:—

The van is to consist of grenadiers, to be called the 1st Life Potatoes, who are to shower the effective missile they take their name from on the quarters where it is most needed.

The right wing is to be formed of the Household Bread and Meat Brigade; troops that may be depended upon for giving the enemy a bellyful. They are to be instructed to give no quarter, except the quartern loaf. The left shall be constituted by the Heavy (Barclay's) Dragoons, who will have formed a junction with Guinness' regiment at Dublin. These stout fellows will soon drench all their adversaries. In the centre shall be stationed the Light Eatables and Drinkables. The old Coercion Company is to be disbanded as useless, even as a forlorn hope.

The whole army is to be flanked by a squadron of schoolmasters, who are to form a *corps de reserve*, to act only when the victory is decided, in order to complete and secure it. For, till the operations of the Provisional Battalion have been successful, the services of the scholastic force will be unavailing. The former, however, having broken the enemy's line, his utter route and discomfiture by the latter is inevitable.—*Punch*.

**NEW SIGN OF DEATH.**—The following discovery may be of great service in cases of suspected death. The communication was lately made to the Royal Academy of Sciences, Paris, by M. Ripault, who, in directing the attention of members to the discovery, observed, that it consisted in perfect flaccidity of the iris when the globe of the eye is compressed in two opposite directions. If the individual be living, the pupil retains its circular form, notwithstanding the compression; if dead, the aperture becomes irregular, and the circular form is lost.

From the Athenæum.

## SIXTEENTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

SOUTHAMPTON, SEPT. 9.

*General Committee.*

THE committee assembled in the town hall, at one o'clock, and the chair was taken by the president, Sir John Herschel.

The secretary read the report of the council; which congratulated the association on the success of the application made to her majesty's government for carrying into effect the recommendations respecting magnetic and meteorological observations adopted at the Cambridge meeting, [*Ath. No. 922.*] Sir R. Peel had recognized the importance of having these observations regularly made at the British observatories, and in the colonies; and the East India Company had given directions for their continuance at Fort William, Bombay, and Madras. They are to be continued, also, at Toronto and St. Helena; and arrangements are in progress for establishing them at Paramatta and the Cape of Good Hope. The magnetic survey of the East India seas is in progress; and so is that of Hudson's Bay—which will connect itself with Sir John Franklin's survey of the northern parts of America. Through the Earl of Aberdeen, application was made to foreign governments for the communication of such observations as had been made under their directions, and favorable answers had been received. Her majesty's government had promised a favorable consideration to the application made by the association and the Royal Society, conjointly, that a premium should be offered for improvements in the construction of magnetic and meteorological instruments; and the Royal Society had given the sum of £50, from the Wollaston fund, for the construction of a self-registering instrument of this kind, at the association's observatory at Kew.

On the motion of Sir Roderick Impey Murchison, the president elect, seconded by the Marquis of Northampton, it was resolved that his royal highness Prince Albert having signified his intention to visit the association and attend the opening meeting, the association do elect him their sole honorary member. The motion was carried by acclamation.

## EVENING MEETING—THURSDAY.

The business of the sections—seven in number—commenced in the morning; but we shall postpone our report of their proceedings till our next publication, for the purpose of coming at once to the opening general meeting and the president's address. The expected visit of H. R. H. Prince Albert attracted a large assembly; and on his arrival, a little after eight o'clock, Sir John Herschel opened the proceedings by announcing that he was about to vacate the chair, and make room for the president elect, Sir R. I. Murchison. In doing so, he congratulated the association on the bright prospect before them of a most successful meeting at Southampton. Sir R. I. Murchison then delivered the annual address, as follows.

*The President's Address.*

GENTLEMEN,—After fifteen years of migration to various important cities and towns in the United

Kingdom, you are for the first time assembled in the southeastern districts of England, at the solicitation of the authorities and inhabitants of Southampton. Easily accessible on all sides to the cultivators of science, this beautiful and flourishing seaport is situated in a district so richly adorned by nature, so full of objects for scientific contemplation, that, supported as we are by new friends in England, and by old friends from the farthest regions of Europe, we shall indeed be wanting to ourselves, if our proceedings on this occasion should not sustain the high character which the British Association has hitherto maintained.

For my own part, though deeply conscious of my inferiority to my eminent predecessor in the higher branches of science, I still venture to hope that the devotion I have manifested to this association from its origin to the present day, may be viewed by you as a guarantee for the zealous execution of my duties. Permit me, then, gentlemen, to offer you my warmest acknowledgments for having placed me in this honorable position; and to assure you, that I value the approbation which it implies as the highest honor which could have been bestowed on me—an honor the more esteemed from its being conferred in a county endeared to me by family connexions, and in which I rejoice to have made my first essay as a geologist.

The origin, progress, and objects of this our "parliament of science" have been so thoroughly explained on former occasions by your successive presidents, particularly in reference to that portion of our body which cultivates the mathematical, chemical, and mechanical sciences, that after briefly alluding to some of the chief results of bygone years, with a view of impressing upon our new members the general advances we have made, I shall in this discourse dwell more particularly on the recent progress and present state of natural history, the department of knowledge with which my own pursuits have been most connected, whilst I shall also incidentally advert to some of the proceedings which are likely to occupy our attention during this meeting.

No sooner, gentlemen, had this association fully established its character as a legitimate representative of the science of the United Kingdom, and by the reports which it had published, the researches which it had instituted, and the other substantial services which it had rendered to science, had secured public respect, than it proceeded towards the fulfilment of the last of the great objects which a Brewster and a Harcourt contemplated at its foundation, by inviting the attention of the government to important national points of scientific interest. At the fourth meeting, held in Edinburgh, the association memorialized the government to increase the forces of the Ordnance Geographical Survey of Britain, and to extend speedily to Scotland the benefits which had been already applied by that admirable establishment to the south of England, Wales, and Ireland. From that time to the present it has not scrupled to call the notice of the ministers of the day to every great scientific measure which seemed, after due consideration, likely to promote the interests or raise the character of the British nation. Guided in the choice of these applications by a committee selected from among its members, it has sedulously avoided the presentation of any request which did not rest on a rational basis; and our rulers, far from resisting such appeals, have uniformly and cordially acquiesced in them. Thus it was when, after paying large sums

from our own funds for the reduction of large masses of astronomical observations, we represented to the government the necessity of enabling the astronomer-royal to perform the same work on the observations of his predecessors which had accumulated in the archives of Greenwich, our appeal was answered by arrangements for completing so important a public object at the public expense. Thus it was, when contemplating the vast accession to pure science as well as to useful maritime knowledge to be gained by the exploration of the South Polar regions, that we gave the first impulse to that project of the great Antarctic expedition, which, supported by the influence of the Royal Society and its noble president, obtained the full assent of the government, and led to results which, through the merits of Sir James Ross and his companions, have shed a bright lustre on our country, by copious additions to geography and natural history, and by affording numerous data for the development of the laws that regulate the magnetism of the earth.

The mention of terrestrial magnetism brings with it a crowd of recollections creditable to the British Association, from the perspicuous manner in which every portion of fresh knowledge on this important subject has been stored up in our volumes, with a view to generalization, by Colonel Sabine and others; whilst a wide field for its diffusion and combination has been secured by the congress held at our last meeting, at which some of the most distinguished foreign and British magneticians were assembled under the presidency of Sir John Herschel.

It is indeed most satisfactory for us to know, that not only did all the recommendations of the association on this subject which were presented to our government meet with a most favorable reception, but that, in consequence of the representations made by her majesty's secretary of state for foreign affairs to the public authorities of other countries which had previously taken part in the system of coöperative observation, the governments of Russia, Austria, Prussia, and Belgium have notified their intention of continuing their respective magnetic and meteorological observations for another term of three years.

In passing by other instances in which public liberality has been directed to channels of knowledge which required opening out, I must not omit to notice the grant obtained from our gracious sovereign, of the royal observatory at Kew, which, previously dismantled of its astronomical instruments, has been converted by us into a station for observations purely physical, and especially for those details of atmospheric phenomena which are so minute and numerous, and require such unremitting attention, that they imperiously call for separate establishments. In realizing this principle, we can now refer British and foreign philosophers to the observatory of the British Association at Kew, where I have the authority of most adequate judges for saying they will find that a great amount of electrical and meteorological observation has been made, and a systematic inquiry into the intricate subject of atmospheric electricity carried out, by Mr. Ronalds, under the suggestions of Prof. Wheatstone, to which no higher praise can be given than that it has, in fact, furnished the model of the processes conducted at the royal observatory of Greenwich. This establishment is besides so useful through the facilities which it offers for researches into the working of self-registering instruments which are

there constructed, that I earnestly hope it may be sustained as heretofore by annual grants from our funds, particularly as it is accomplishing considerable results at very small cost.

Our volume for the last year contains several communications on physical subjects from eminent foreign cultivators of science, whom we have the pleasure of reckoning amongst our corresponding members, and whose communications, according to the usage of the association, have been printed entire amongst the reports. In a discussion of the peculiarities by which the great comet of 1843 was distinguished, Dr. von Boguslawski, of Breslau, has taken the occasion to announce the probability, resting on calculations which will be published in Schumacher's "*Astronomische Nachrichten*," of the identity of this comet with several of a similar remarkable character recorded in history, commencing with the one described by Aristotle, which appeared in the year 371 before our era: should his calculations be considered to establish this fact, Dr. von Boguslawski proposes that the comet should hereafter be distinguished by the name of "*Aristotle's comet*." This communication contains also some highly ingenious and important considerations relating to the physical causes of the phenomena of the tails of comets.

Dr. Paul Erman, of Berlin, father of the adventurous geographical explorer and magnetician who was one of the active members of the magnetic congress at Cambridge, has communicated through his son some interesting experiments on the electrodynamic effects of the friction of conducting substances, and has pointed out the differences between these and normal thermo-electric effects. Baron von Senftenberg (who is an admirable example of how much may be done by a liberal zeal for science combined with an independent fortune) has published an account of the success with which self-registering meteorological instruments have been established at his observatory at Senftenberg, as well as at the national observatory at Prague.

Of our own members, Mr. Birt has contributed a second report on atmospheric waves, in continuation of the investigation which originated in the discussion by Sir John Herschel, of the meteorological observations which, at his suggestion, were made in various parts of the globe, at the periods of the equinoxes and solstices, commencing with the year 1834.

In a communication to the meeting of the association at York, Colonel Sabine traced with great clearness (from the hourly observations at Toronto) the effect of the single diurnal and single annual progressions of temperature, in producing on the mixed vapors and gaseous elements of the atmosphere, the well-known progressions of daily and yearly barometrical pressure. To the conclusions which he then presented, and which apply, perhaps generally, to situations not greatly elevated in the interior of large tracts of land, the same author has added, in the last volume, a valuable explanation of the more complicated phenomena which happened at points where land and sea breezes, flowing with regularity, modify periodically and locally the constitution and pressure of the atmosphere. Taking for his data the two-hourly observations executed at the observatory of Bombay by Dr. Buist, Colonel Sabine has succeeded in demonstrating for this locality a *double-daily progression of gaseous pressure*, in accordance with the flow and re-flow of the air from surfaces of land and water which are unequally



affected by heat. And thus the diurnal variation of the daily pressure at a point within the tropics, and on the margin of the sea, is explained by the same reasoning which was suggested by facts observed in the interior of the vast continent of North America.

Among the many useful national objects which have been promoted by the physical researches of the British Association, there is one which calls for marked notice at this time, in the proposal of Mr. Robert Stephenson to carry an iron tube, or suspended tunnel, over the Menai Straits, to sustain the great railway to Holyhead. This bold proposal could never have been realized if that eminent engineer had not been acquainted with the great progress recently made in the knowledge of the strength of materials, and especially of iron; such knowledge being in great measure due to investigations in which the association has taken and is still taking a conspicuous share, by the devotion of its friends and the employment of its influence—investigations which have been prosecuted with great zeal and success by its valued members, Mr. Hodgkinson and Mr. Fairbairn.

Whilst on this topic I may observe, that in the recent improvements in railways the aid of scientific investigation was called for by the civil engineer, to assist him in determining with accuracy the power to be provided for attaining the high velocities of fifty and sixty miles an hour; and it was found and admitted by the most eminent engineers, that the very best data for this purpose, and indeed the only experiments of any practical value, were those which had been provided for some years ago by a committee of the British Association, and published in our transactions. The Institution of Civil Engineers thus gave testimony to the practical value of our researches by adopting their results.

However imperfect my knowledge of such subjects may be, I must now notice that the last volume of our Reports contains two contributions to experimental philosophy, in which subjects of the deepest theoretical and practical interest have been elucidated, at the request of the association, by the labors of its foreign coadjutors.

That some substance of a peculiar kind everywhere exists, or is formed in the atmosphere by electrical agency, both natural and artificial, had long been suspected, especially from the persistency of the odor developed by such agency, and its transference by contact to other matter. Prof. Schönbein, to whom I shall hereafter avert as the author of a new practical discovery, is, however, the first philosopher who undertook to investigate the nature of that substance; and though the investigation is not yet complete, he has been enabled to report no inconsiderable progress in this difficult and refined subject of research.

A request from the association to Prof. Bunsen, of Marburg, and our countryman, Dr. Lyon Playfair, coupled with a contribution of small amount towards the expenses involved in the undertaking, has produced a report on the conditions and products of iron furnaces, which is of the greatest value in a commercial view to one of the most important of our manufactures, and possesses at the same time a very high interest to chemical science in some of the views which it develops. On the one hand, it exhibits an entirely new theory of the reduction, by cyanogen gas as the chief agent, of iron from the ore: on the other it shows, that in addition to a vast saving of fuel, about two cwt. of

sal-ammoniac may daily be collected at the single establishment of Alfreton, where the experiments were made;—thus leading us to infer that in the iron-furnaces of Britain there may be obtained from vapor which now passes away, an enormous quantity of this valuable substance, which would materially lessen the dependence of our agriculturists on foreign *guano*. It is indeed most gratifying to observe, that in pursuing this inquiry into the gaseous contents of a blazing furnace of great height, our associates traced out, foot by foot, the most recondite chemical processes, and described the fiery products with the same accuracy as if their researches had been made on the table of a laboratory.

Weighed, however, only in the scales of absolute and immediate utility, the remarkable results of these skilful and elaborate experiments give them a character of national importance, and justly entitle the authors and the body which has aided them to the public thanks.

After this glance at the subjects of purely physical science treated of in the last volume of our Transactions, let us now consider the domains of Natural History:—and, as one of the cultivators of a science which has derived its main support and most of its new and enlarged views from naturalists, let me express the obligation which geologists are under to this association, for having aided so effectively in bringing forth the zoological researches of Owen, Agassiz, and Edward Forbes. These three distinguished men have themselves announced, that in default of its countenance and assistance, they would not have undertaken, and never could have completed, some of their most important inquiries. Agassiz, for example, had not otherwise the means of comparing the ichthyolites of the British isles with those of the continent of Europe. Without this impulse, Owen would not have applied his profound knowledge of comparative anatomy to British fossil saurians; and Edward Forbes might never have been the explorer of the depths of the *Ægean*, nor have revealed many hitherto unknown laws of submarine life, if his wishes and suggestions had not met with the warm support of this body, and been supported by its strongest recommendations to the naval authorities.

These allusions to naturalists, whose works have afforded the firmest supports to geology, might lead me to dilate at length on the recent progress of this science; but as the subject has been copiously treated at successive anniversaries of the Geological Society of London, and has had its recent advances so clearly enunciated by the actual president of that body who now presides over our geological section, I shall restrain my "*esprit de corps*" whilst I briefly advert to some of the prominent advances which geologists have made. When our associate Conybeare reported to us, at our second meeting, on the actual state and ulterior prospects of what he well termed the "*archæology of the globe*," he dwelt with justice on the numerous researches in different countries which had clearly established the history of a descent as it were into the bowels of the earth—which led us, in a word, downwards through those newer deposits that connect high antiquity with our own period, into those strata which support our great British coalfields. Beyond this, however, the perspective was dark and doubtful—

*Res alâ terrâ et caligine mersas.*

Now, however, we have dispersed this gloom; and

researches, first carried out to a distinct classification in the British Isles, and thence extended to Russia and America, geologists have shown that the records of succession, as indicated by the entombment of fossil animals, are as well developed in these very ancient or palæozoic strata as in any of the overlying or more recently formed deposits. After toiling many years in this department of the science, in conjunction with Sedgwick, Lonsdale, De Verneuil, Keyserling, and others of my fellow-laborers, I have arrived at the conclusion, that we have reached the very genesis of animal life upon the globe, and that no further "vestigia retrorsum" will be found, beneath the protozoic or Lower Silurian group in the great inferior mass of which no vertebrate animal has yet been detected, amid the countless profusion of the lower orders of marine animals entombed in it. But however this may be, it is certain that in the last few years all Central and Eastern Europe and even parts of Siberia have been brought into accordance with British strata. France has been accurately classified and illustrated by the splendid map of Elie de Beaumont and Dufrenoy; and whilst, by the labors of Deshayes and others, its tertiary fossils have been copiously described, the organic remains of its secondary strata are now undergoing a complete analysis in the beautiful work of M. Alcide d'Orbigny. Belgium, whose mineral structure and geological outlines have been delineated by D'Omalus d'Halloy and Dumont, has produced very perfect monographs of its palæozoic and tertiary fossils; the first in the work of M. de Koningk, the second in the recently published monograph of M. Nyst. Germany, led on by Von Buch, has shown that she can now as materially strengthen the zoological and botanical groundworks of the science, as in the days of Werner she was eminent in laying those mineralogical foundations which have been brought so near to perfection by the labors of several living men. So numerous in fact have been the contributions of German geologists, that I cannot permit myself to specify the names of individuals in a country which boasts so many who are treading closely in the steps of an Ehrenberg and a Rosé. As distinctly connected, however, with the objects of this meeting, I must be permitted to state that the eminent botanist Goeppert, whose works, in combination with those of Adolphe Brongniart in France, have shed so much light on fossil plants, has just sent to me, for communication to our geological section, the results of his latest inquiries into the formation of the coal of Silesia—results which will be the more interesting to Dr. Buckland and the geologists of England, because they are founded on data equally new and original. Italy has also to a great extent been presented to us in its true general geological facies, through the labors of Sismonda, Marmora, Pareto and others; whilst our kinsmen of the far West have so ably developed the structure of their respective states, that our countryman Lyell has informed us, that the excellent map which accompanies his work upon North America is simply the grouping together of data prepared by native state geologists, which he has paralleled with our well-known British types.

If then the astronomer has, to a vast extent, expounded the mechanism of the heavens—if lately, through the great telescope of our associate the Earl of Rosse, he has assigned a fixity and order to bodies which were previously viewed as mere nebulae floating in space, and has also inferred that surface-cavities in our nearest neighbor of the

planetary system are analagous to the volcanic apertures and depressions of the earth; the geologist, contributing data of another order to the great storehouse of natural knowledge, has determined, by absolute and tangible proofs, the precise manner in which our planet has been successively developed in divers elements, each teeming with peculiar forms of distinct life, and has marked the revolutions which have interfered with these successive creations, from the earliest dawn of living things to the limits of the historic era. In short, the fundamental steps gained in geology, since the early days of the British Association, are so remarkable and so numerous, that the time has now come for a second report upon the progress of this science, which may I trust be prepared for an approaching, if not for the next meeting.

Intimately connected with these broad views of the progress of geology is the appearance of the first volume of a national work by Sir Henry De la Beche and his associates in the geological survey of Great Britain. Following, as it does, upon the issue of numerous detailed colored maps and sections, which for beauty of execution and exactness of detail are unrivalled, I would specially direct your attention to this new volume as affording the clearest evidence that geology is now strictly brought within the pale of the fixed sciences. In it are found graphic descriptions of the strata in the south-west of England and South Wales, whose breadth and length are accurately measured—whose mineral changes are chemically analyzed—and whose imbedded remains are compared and determined by competent palæontologists. The very statistics of the science are thus laid open—theory is made rigorously to depend on facts—and the processes and produce of foreign mines are compared with those of Britain.

When we know how intimately the director-general of this survey and his associates have been connected with the meetings of the British Association, and how they have freely discussed with us many parts of their researches—when we recollect that the geologist of Yorkshire, our invaluable assistant general secretary, around whom all our arrangements, since our origin, have turned, and to whom so much of our success is due, occupies his fitting place among these worthies—that Edward Forbes, who passed, as it were, from this association to the Ægean, is the palæontologist of this survey—and again, when we reflect that, if this association had not repaired to Glasgow, and there discovered the merits of the survey of the Isle of Arran by Mr. Ramsay, that young geologist would never have become a valuable contributor to the volume under consideration—it is obvious, from these statements alone, that the annual visits of our body to different parts of the empire, by bringing together kindred spirits, and in testing the natural capacity of individuals, do most effectually advance science and benefit the British community.

Whilst considering these labors of the government geologists, I shall now specially speak of those of Professor E. Forbes in the same volume, because he here makes himself doubly welcome, by bringing to us, as it were, upon the spot, the living specimens of submarine creatures, which—through the praiseworthy enthusiasm of Mr. McAndrew, one of our members, who fitted out a large yacht, for natural history researches—have been dredged up this summer, by these naturalists, from the southern coast, between the Land's End

and Southampton. As a favorite yachting port like Southampton may, it is hoped, afford imitators, I point out with pleasure the liberal example of Mr. McAndrew—who, not professing to describe the specimens he collects, has on this, as on former occasions, placed them in the hands of the members best qualified to do them justice, and is thus a substantial promoter of science.

The memoir of Edward Forbes, in the government geological survey, to which, however, I would allude, is, in truth, an extension of his views respecting the causes of the present distribution of plants and animals in the British isles, first made known at the last meeting of the British Association. As this author has not only shown the application of these ideas to the researches of the British geological survey, but also to the distribution of animals and plants over the whole earth, it is evident that these views, in great part original, will introduce a new class of inquiries into natural history, which will link it on more closely than ever to geology and geography. In short, this paper may be viewed as the first attempt to explain the causes of the zoological and botanical features of any region anciently in connection. Among the new points which it contains, I will now only mention that it very ingeniously (and I think most satisfactorily) explains the origin of the peculiar features of the botany of Britain—the theory of the origin of Alpine Floras distributed far apart—the peculiarity of the zoology of Ireland as compared with that of England—the presence of the same species of marine animals on the coasts of America and Europe—the specialties of the marine zoology of the British seas called for by this association—the past and present distribution of the great Mediterranean Flora;—and lastly, it applies to the knowledge we possess of the distribution of plants to the elucidation of the history of the superficial detritus, termed by geologists, the “Northern Drift.”

Amid the numerous subjects for reflection which the perusal of this memoir occasions, I must now restrict myself to two brief comments:—First, to express my belief that even Humboldt himself, who has written so much and so admirably on Alpine Floras, will admit that our associate’s explanation of the origin of identity removes a great stumbling-block from the path of botanical geographers. Secondly, having myself for some years endeavored to show, that the Alpine glacialists had erroneously applied their views as founded on terrestrial phenomena to large regions of Northern Europe, which must have been under the sea during the distribution of erratic blocks, gravel, and boulders, I cannot but consider it a strong confirmation of that opinion, when I find so sound a naturalist as Edward Forbes sustaining the same view by perfectly independent inferences concerning the migration of plants to isolated centres, and by a studious examination and comparison of all the sea-shells associated with these transported materials. And, if I mistake not, my friend Mr. Lyell will find in both the above points strong evidences in support of his ingenious climatal theories.

Recent as the blocks and boulders to which I have alluded may seem to be, they were, however, accumulated under a glacial sea, whose bottom was first raised to produce that connection between the continent and Britain, by which the land animals migrated from their parent east to our western climes; a connection that was afterwards broken through by the separation of our islands, and by

the isolation in each of them of those terrestrial races which had been propagated to it. This latter inference was also, indeed, thoroughly sustained by the researches of Professor Owen, communicated to this association; first, in the generalization by which his report on the Extinct Mammals of Australia is terminated, and still more in detailed reference to our islands in his recently published work, “On the Extinct Fossil British Mammalia”—a work which he has stated in his dedication originated at the call of the British Association. Professor Owen adds, indeed, greatly to the strength of our present meeting, by acting as the president of one of our sections, which having in its origin been exclusively occupied in the study of medicine, is now more peculiarly devoted to the cultivation of physiology. Under such a leader I have a right to anticipate that this remodelled section will exhibit evidences of fresh vigor, and will clearly define the vast progress that has been made in general and comparative anatomy since the days of Hunter and of Cuvier—for so large a part of which we are indebted to our eminent associate.

Assembled in a county which has the good fortune to have been illustrated by the attractive and pleasing history of the Naturalist of Selborne, I am confident that our fourth section, to whose labors I would now specially advert, will yield a rich harvest, the more so as it is presided over by that great zoologist who has enriched the adjacent museum of the naval hospital at Haslar with so many animals from various parts of the world, and has so arranged them as to render them objects well worthy of your notice. The report of Sir John Richardson in the last volume, on the Fishes of China, Japan and New Zealand, when coupled with his account in former volumes of the Fauna of North America, may be regarded as having completely remodelled our knowledge of the geographical distribution of fishes; first, by affording the data, and next by explaining the causes through which a community of ichthyological characters is in some regions widely spread, and in others restricted to limited areas. We know now, that just as the lofty mountain is the barrier which separates different animals and plants, as well as peculiar varieties of man, so the deepest seas are limits which peremptorily check the wide diffusion of certain genera and species of fishes; whilst the interspersions of numerous islands, and still more the continuance of lands throughout an ocean, insures the distribution of similar forms over many degrees of latitude and longitude.

The general study, indeed, both of zoology and botany has been singularly advanced by the labors of the section of natural history. I cannot have acted for many years as your general secretary without observing, that by the spirit in which this section has of late years been conducted, British naturalists have annually become more philosophical, and have given to their inquiries a more physiological character, and have more and more studied the higher questions of structure, laws and distribution. This cheering result has mainly arisen from the personal intimacy brought about among various individuals, who, living at great distances from each other, were previously never congregated, and from the mutual encouragement imparted by their interchange of views and their comparisons of specimens. Many active British naturalists have, in fact, risen up since these meetings commenced, and many (in addition to the ex-



amples already alluded to) have pursued their science directly under the encouragement we have given them. The combination of the enthusiastic and philosophic spirit thus engendered among the naturalists has given popularity to their department of science; and this section, assuming an importance to which during our earliest meetings it could show comparatively slender claims, has vigorously revived the study of natural history, and among other proofs of it, has given rise to that excellent publishing body, the Ray Society, which holds its anniversary during our sittings. Any analysis of the numerous original and valuable reports and memoirs on botanical and zoological subjects which have enriched our volumes is forbidden by the limits of this address, but I cannot omit to advert to the extensive success of Mr. H. Strickland's Report on Zoological Nomenclature, which has been adopted and circulated by the naturalists of France, Germany and America, and also by those of Italy, headed by the Prince of Canino. In each of these countries the code drawn up by the association has been warmly welcomed, and through it we may look forward to the great advantage being gained of the ultimate adoption of an uniform zoological nomenclature all over the globe.

Whilst investigations into the geographical distribution of animals and plants have occupied a large share of the attention of our Browns and our Darwins, it is pleasing to see that some of our members, chiefly connected with physical researches, are now bringing these data of natural history to bear upon climatology and physical geography. A committee of our naturalists, to whom the subject was referred, has published in our last volume an excellent series of instructions for the observation of the periodical phenomena of animals and plants, prepared by our foreign associate, M. Quetelet, the astronomer-royal of Belgium. Naturalists have long been collecting observations on the effects produced by the annual return of the seasons, but their various natural history calendars being local, required comparison and concentration, as originally suggested by Linnæus. This has now for the first time been executed by the Belgian Astronomer, who, following out a plan suggested by himself at our Plymouth meeting, has brought together the contributions and suggestions of the naturalists of his own country. When M. Quetelet remarks, "that the phases of the smallest insect are bound up with the phases of the plant that nourishes it; that plant itself being in its gradual development the product, in some sort, of all anterior modifications of the soil and atmosphere," he compels the admission, that the study which should embrace all periodical phenomena, both diurnal and annual, would of itself form a science as extended as instructive.

Referring you to M. Quetelet's report for an explanation of the dependence of the vegetable and animal kingdoms on the meteorology and physics of the globe, and hoping that the simultaneous observations he inculcates will be followed up in Britain, I am glad to be able to announce, that the outline of a memoir on physical geography was some months ago put into my hands by Mr. Cooley, which, in a great degree coinciding with the system of M. Quetelet, has ultimately a very different object. M. Quetelet chiefly aims at investigating the dependence of organized bodies on inorganic matter, by observing the periodical phenomena of the former. Mr. Cooley seeks to obtain an acquaintance with the same phenomena for the

sake of learning and registering comparative climate as an element of scientific agriculture. Speaking to you in a county which is so mainly dependent on the produce of the soil, I cannot have a more favorable opportunity for inculcating the value of the suggestions of this British geographer. The complete establishment of all the data of physical geography throughout the British islands; i. e. the registration of the mean and extremes of the temperature of the air and of the earth; the amount of conduction, radiation, moisture and magnetism; the succession of various phases of vegetation, &c., (with their several local corrections for elevation and aspect,) must certainly prove conducive to the interests of science, and are likely to promote some material interests of our country.

A minute knowledge of all the circumstances of climate cannot but be of importance to those whose industry only succeeds through the coöperation of nature; and it may therefore be inferred that such a report as that with which I trust Mr. Cooley will favor us, if followed up by full and complete tables, will prove to be a most useful public document. Imbibing the ardor of that author, I might almost hope that such researches in physical geography may enable us to define, in the language of the poet—

*Et quid quæque ferat regio, et quid quæque recuset.*

At all events, such a report will tend to raise physical geography in Britain towards the level it has attained in Prussia under the ægis of Humboldt and Ritter, and by the beautiful maps of Berghaus.

Though our countryman, Mr. Keith Johnston, is reproducing, in attractive forms, the comparative maps of the last-mentioned Prussian author, much indeed still remains to be done in Britain, to place the study of physical geography on a basis worthy of this great exploring and colonizing nation;—and as one of the highly useful elementary aids to the training of the youthful mind to acquire a right perception of the science, I commend the spirited project of a French geographer, M. Guérin, to establish in London a georama of vast size, which shall teach by strong external relief, the objects and details of which he will, in the course of this week, explain to the geographers present.

Reverting to economical views and the improvement of lands, I would remind our agricultural members that, as their great practical society was founded on the model of the British Association, we hope they will always come to our sections for the solution of any questions relating to their pursuits to which can be given a purely scientific answer. If they ask for the explanation of the dependence of vegetation upon subsoil or soil, our geologists and botanists are ready to reply to them. Is it a query on the comparison of the relative value of instruments destined to economize labor, the mechanicians now present are capable of answering it. And if, above all, they ask us to solve their doubts respecting the qualities of soils and the results of their mixtures, or the effects of various manures upon them, our chemists are at hand. One department of our institution is, in fact, styled the Section of Chemistry and Mineralogy, with their applications to agriculture and the arts, and is officered in part by the very men, Johnston, Daubeny, and Playfair, to whom the agriculturists have in nearly all cases appealed. The

first mentioned of these was one of our earliest friends and founders; the second had the merit of standing by the British Association at its first meeting, and there inviting us to repair to that great university where he is so much respected, and where he is now steadily determining, by elaborate experiments, the dependence of many species of plants on soil, air, and stimulus; whilst the third has already been alluded to as one of our best contributors.

If, in reviewing our previous labors, I have endeavored to gain your attention by some incidental allusions to our present proceedings, I have yet to assure you, that the memoirs communicated to our secretaries are sufficiently numerous to occupy our sections during the ensuing week with all the vigor which has marked our opening day. Among the topics to which our assembling at Southampton gives peculiar interest, I may still say that if foreign and English geologists should find much to interest them in the Isle of Wight, the same island contains a field for a very curious joint discussion between the mathematicians and the geologists, with which I became acquainted in a previous visit to this place. It is a discovery by Col. Colby, the director of the Trigonometrical survey, of the existence of a considerable attraction of the plumb-line to the south, at the trigonometrical station called Dunnose, on Shanklin Down. The details of this singular phenomenon, which has been verified by numerous observations with the best zenith sectors, will be laid before the sections. In the mean time, we may well wonder that this low chalk range in the Isle of Wight should attract, in one parallel at least, with more than half the intensity of the high and crystalline mountain of Schehallion in the Highlands of Scotland. Can those of our associates, who, like Mr. Hopkins, have entered the rich field of geological dynamics, explain this remarkable fact, either by the peculiar structure and distribution of the ridge of upheaved strata which runs as a backbone from east to west through the island, or by referring it to dense plutonic masses of rock ranging beneath the surface along the line of displacement of the deposits?

Another local subject—one indeed of positive practical interest—that stands before us for discussion is, whether, by persevering in deepening the large shaft which they have sunk so deep into the chalk near this town, the inhabitants of Southampton may expect to be eventually repaid, like those of Paris, by a full supply of subterranean water, which shall rise to the surface of the low plateau on which the work has been undertaken? On no occasion, I must observe, could this town be furnished with a greater number of willing counsellors of divers nations, whose opinions will, it is hoped, be adequately valued by the city authorities. The question whether this work ought to be proceeded with or not, will, however, I apprehend, be most effectively answered by those geologists who are best acquainted with the sections in the interior of this county, and with the levels at which the upper greensand and subcretaceous strata there crop out and receive the waters, which thence flow southwards beneath the whole body of chalk of the hills in the south of Hampshire.

Considering that we are now assembled in the neighborhood of our great naval arsenal—that some of its functionaries, including the admiral on the station, have honored us with their support, and that, further, I am now speaking in a town whose magnificent new docks may compete with any for

bold and successful engineering, I must say a few words on our naval architecture—the more so, as we have here a very strong mechanical section, presided over by that eminent mechanician Professor Willis, assisted by that great dynamical mathematician Dr. Robinson, and that sound engineer George Rennie. Duly impressed with the vast national importance of this subject, and at the same time of its necessary dependence on mathematical principles, the British Association endeavored in its earliest days to rouse attention to the state of ship-building in England, and to the history of its progress in France and other countries, through a memoir by the late Mr. G. Harvey. It was then contended, that notwithstanding the extreme perfection to which the internal mechanism of vessels had been brought, their external forms or lines, on which their sailing so much depends, were deficient as to adjustment by mathematical theory. Our associate Mr. Scott Russell has, as you know, ably developed this view. Experimenting upon the resistance of water, and ascertaining with precision the forms of vessels which would pass through it with the least resistance, and consequently with the greatest velocity, he has contributed a most valuable series of memoirs, accompanied by a great number of diagrams, to illustrate his opinions and to show the dependence of naval architecture on certain mathematical lines. Employed in the mean time by merchants, on their own account, to plan the construction of sailing ships and steamers, Mr. Scott Russell has been so successful in combining theory with practice, that we must feel satisfied in having at different meetings helped him onwards by several money grants;—our only regret being, that our means should not have permitted us to publish the whole number of diagrams of the lines prepared by this ingenious author.

But however desirous to promote knowledge on this point, the men of science are far from wishing not to pay every deference to the skilful artificers of our wooden bulwarks, on account of their experience and practical acquaintance with subjects they have so long and so successfully handled. We are indeed fully aware, that the naval architects of the government, who construct vessels carrying a great weight of metal, and requiring much solidity and capacious stowage, have to solve many problems with which the owners of trading vessels or packets have little concern. All that we can wish for is, that our naval arsenals should contain schools or public boards of ship-building, in which there might be collected all the “constants of the art,” in reference to capacity, displacement, stowage, velocity, pitching and rolling, masting, the effect of sails and the resistance of fluids. Having ourselves expended contributions to an extent which testifies, at all events, our zeal in this matter, we are, I think, entitled to express a hope that the data derived from practice by our eminent navigators may be effectively combined with the indications of sound theory prepared by approved cultivators of mathematical and mechanical science.

I cannot thus touch upon such useful subjects without saying that our statistical section has been so well conducted by its former presidents, that its subjects, liable at all times to be diverted into moral considerations and thence into politics, have been invariably restricted to the branch of the science which deals in facts and numbers; and as no one individual has contributed more to the store-

house of such valuable knowledge than Mr. George Porter, (as evidenced even by his report in our last volume,) so may we believe that in this town, with which he is intimately connected, he will contribute to raise still higher the claims of the section over which he is so well qualified to preside.

If in this discourse I have referred more largely to those branches of science which pertain to the general division of natural history, in which alone I can venture to judge of the progress which others are making, let me, however, say, that no member of this body can appreciate, more highly than I do, the claims of the mathematical and experimental parts of philosophy, in which my friend Prof. Baden Powell, of Oxford, who supports me on this occasion as a vice-president, has taken so distinguished a part. No one has witnessed with greater satisfaction the attendance at our former meetings of men from all parts of Europe the most eminent in these high pursuits. No one can more glory in having been an officer of this association when it was honored with the presence of its illustrious correspondent Bessel, than whom the world has never produced a more profound astronomer. If, among his numerous splendid discoveries, he furnished astronomers with what they had so long and so ardently desired—a fixed and ascertained point in the immensity of space, beyond the limits of our own sidereal system, it is to Bessel, as I am assured by a contemporary worthy of him, that Englishmen owe a debt of gratitude for his elaborate discussion of the observations of their immortal Bradley, which, in his hands, became the base of modern Astronomy.

Passing from this recollection, so proud, yet so mournful, to us all as friends and admirers of the deceased Prussian astronomer, can any one see with more delight than myself the brilliant concurrence at our present meeting of naturalists, geologists, physiologists, ethnologists and statisticians, with mathematicians, astronomers, mechanicians, and experimental philosophers in physics and in chemistry! Surely, then, I may be allowed to signalize a particular ground of gratification among so many, in the presence at this meeting of two individuals in our experimental sections, to one of whom, our eminent foreign associate, Oersted, we owe the first great link between electric and magnetic phenomena, by showing the magnetic properties of the galvanic current; whilst the other, our own Faraday, among other new and great truths which have raised the character of English science throughout the world, obtained the converse proof by evoking electricity out of magnets. And if it be not given to the geologist whom you have honored with this chair, to explain how such arcana have been revealed, still, as a worshipper in the outer portico of the temple of physical science, he may be permitted to picture to himself the delight which the Danish philosopher must have felt when, on returning to our shores, after an absence of a quarter of a century, he found that the grand train of discovery of which he is the progenitor had just received its crowning accession in England from his former disciple, who, through a long and brilliant series of investigations, peculiarly his own, has shown that magnetic or dia-magnetic forces are distributed throughout all nature.

And thus shall we continue to be a true British association, with cosmopolite connexions, so long as we have among us eminent men to attract such foreign contemporaries to our shores. If, then, at the last assembly we experienced the good effects

which flowed from a concentration of profound mathematicians and magneticians, drawn together from different European kingdoms;—if, then, also, the man\* of solid learning, who then represented the United States of America, and who is now worthily presiding over the Cambridge University of his native soil, spoke to us with chastened eloquence of the benefits our institution was conferring on mankind;—let us rejoice that this meeting is honored by the presence of foreign philosophers as distinguished as those of any former year.

Let us rejoice that we have now among us men of science from Denmark, Sweden, Russia, Prussia, Switzerland, Belgium, Italy and France. The king of Denmark, himself personally distinguished for his acquaintance with several branches of Natural History, and a warm patron of science, has honored us by sending hither, not only the great discoverer, Oersted, who, evincing fresh vigor in his mature age, brings with him new communications on physical science, but also my valued friend, the able geologist and chemist, Forchhammer, who has produced the first geological map of Denmark, and who has presented to us a lucid memoir on the influence exercised by marine plants on the formation of ancient crystalline rocks, on the present sea, and on agriculture.

As these eminent men of the North received me as the general secretary of the British association with their wonted cordiality at the last Scandinavian Assembly, I trust we may convince them that the sentiment is reciprocal, and that Englishmen are nearly akin to them in the virtues of friendship and hospitality which so distinguish the dwellers within the circle of Odin.

Still adverting to Scandinavia, we see here a deputy from the country of Linnæus, in the person of Professor Svanberg, a successful young experimenter in physics, who represents his great master, Berzelius—that profound chemist and leader of the science of the north of Europe, who established on a firm basis the laws of atomic weights and definite proportions, and who has personally assured me, that if our meeting had not been fixed in the month of September, when the agriculturalists of Sweden assemble at Stockholm, he would assuredly have repaired to us. And if the same cause has prevented Nilsson from coming hither, and has abstracted Retzius from us, (who was till within these few days in England,) I cannot mention these distinguished men, who earnestly desired to be present, without expressing the hope, that the memoirs they communicate to us may give such additional support to our British ethnologists as will enable this new branch of science, which investigates the origin of races and languages, to take the prominent place in our assemblies to which it is justly entitled.

The Royal Academy of Berlin, whose deputies on former occasions have been an Ehrenberg, a Buch, and an Erman, has honored us by sending hither M. Heinrich Rosé, whose work on chemical analysis is a text-book even for the most learned chemists in every country; and whilst his researches on the constitution of minerals, like those of his eminent brother Gustave on their form, have obtained for him so high a reputation, he now brings to us the description of a new metal which he has discovered in the Tantalite of Bavaria.

Switzerland has again given to us that great master in palæontology, Agassiz, who has put arms

\* Mr. Everett.



into the hands of British geologists, with which they have conquered vast regions, and who, now on his road to new glories in America, brings to us his report on the fossil fishes of the basin of London, which will, he assures me, exceed in size all that he has ever written on ichthyolites. From the same country we have our friend Prof. Schönbein, who, in addition to his report on Ozone, to which I have already referred, has now brought to us a discovery of vast practical importance. The "gun-cotton" of Schönbein, the powers of which he will exhibit to his colleagues, is an explosive substance, which, exercising a stronger projectile force than gunpowder, is stated to possess the great advantages over it of producing little or no smoke or noise, and of scarcely soiling fire-arms; whilst no amount of wet injures this new substance, which is as serviceable after being dried as in its first condition. The mere mention of these properties, to which our associate lays claim for his new material, is sufficient to show its extraordinary value in all warlike affairs, as also in every sort of subterranean blasting.

Prof. Matteucci of Modena, who joined us at the York meeting, and then explained his various new and delicate investigations in electro-physiology, again favors us with a visit, as the representative of the Italian Philosophical Society of Modena and of the university of Pisa. This ingenious philosopher, who has measured the effect of galvanic currents in exciting through the nerves mechanical force in the muscles, doubtless brings with him such interesting contribution as will add great additional interest to the proceedings of the physiological section.

Having already spoken of the rapid progress which the sciences are making in Belgium, through the labors of our associate Quetelet and others, it is with pleasure I announce that M. de Koninck, the paleontologist, who has mainly contributed to this advance, and to the solid foundation of the geology of his country, by his excellent work on paleozoic fossils, has been sent to us by his own government.

Among these sources of just pride and gratification, no one has afforded me sincerer pleasure than to welcome hither the undaunted Siberian explorer, Prof. von Middendorf. Deeply impressed as I am with the estimation in which science is held by the illustrious ruler of the empire of Russia, I cannot but hope that the presence of this traveller, so singularly distinguished for his enterprising exploits, may meet with a friend in every Englishman who is acquainted with the arduous nature of his travels. To traverse Siberia from south to north and from west to east;—to reach by land the extreme northern headland of Taimyr;—to teach us, for the first time, that even to the latitude 72° north, trees with stems extend themselves in that meridian;—that crops of rye, more abundant than in his native Livonia, grow beyond Yakutsk, on the surface of that frozen subsoil, the intensity and measure of cold in which he has determined by thermometric experiments;—to explain, through their language and physical form, the origin of tribes now far removed from their parent stock;—to explore the far eastern regions of the Sea of Okhotsk and of the Shantar Isles; to define the remotest north-eastern boundary between China and Russia; and, finally, to enrich St. Petersburg with the natural productions, both fossil and recent, of all these wild and untrodden lands, are the exploits for which the Royal Geographical Society of London has, at its last meeting, conferred its gold Victoria medal on this most successful explorer. Prof. Middendorf

now visits us to converse with our naturalists most able to assist him, and to inspect our museums, in which, by comparison, he can best determine the value of specific characters before he completes the description of his copious accumulations;—and I trust that during his stay in England he will be treated with as much true hospitality as I have myself received at the hands of his kind countrymen.

It is impossible for me to make this allusion to the Russian empire, without assuring you that our allies in science on the Neva, who have previously sent to us a Jacobi and a Kupffer, are warmly desirous of continuing their good connection with us. It was indeed a source of great pleasure to me to have recently had personal intercourse in this very town with that eminent scientific navigator Admiral Lütke, in whose squadron his imperial highness the Grand Duke Constantine was acquiring a knowledge of his maritime duties. Besides the narrative of his former voyages, Lütke has since published an account of the periodical tides in the Great Northern Ocean and in the Glacial Sea, which I have reason to think is little known in this country. Having since established a *hyposalographie* in the White Sea, and being also occupied from time to time in observations in Behring's Straits, the Russians will soon be able to provide us with other important additions to our knowledge of this subject. Separated so widely as Admiral Lütke and Dr. Whewell are from each other, it is pleasing to see that the very recommendation which the last-mentioned distinguished philosopher of the tides has recently suggested to me as a subject to be encouraged by this association, has been zealously advocated by the former. Let us hope, then, that this meeting will not pass away without powerfully recommending to our own government, as well as that of his imperial majesty, that a systematic and simultaneous investigation of the tides, in the Great Ocean, particularly in the Northern Pacific, be the object of special expeditions—a subject (as Admiral Lütke well observes) which is not less worthy of the attention of great scientific bodies than the present inquiries into terrestrial magnetism;—and one which, I may add, this association will doubtless warmly espouse, since it has such strong grounds for being satisfied with the results which it has already contributed to obtain through its own grants, and by the researches of several of its associates.

Lastly, in alluding to our foreign attendants, let us hope that our nearest neighbors may respond to our call, and, imitating the example of their enlightened monarch, may prove by their affluence to Southampton, that in the realms of science, as in public affairs, there is that "entente cordiale" between their great nation and our own, of which, at a former meeting, we were personally assured by the profound Arago himself.

No sooner was it made known that the chair of chemistry at this meeting was to be filled by Michael Faraday, than a compeer worthy of him in the academy of sciences at Paris was announced in the person of M. Dumas. To this sound philosopher it is well known that we owe, not only the discovery of that law of substitution of types, which has so powerfully aided the progress of organic chemistry, but also the successful application of his science to the arts and useful purposes of life: his great work on that subject, "*La Chimie appliquée aux Arts*," being as familiar in every manufactory in England as it is upon the continent.

Nor, if we turn from chemistry to geology, can such of us as work among the rocks be backward in welcoming the French geologists who have come to examine in our own natural sections of the Isle of Wight, the peculiar development of their Paris basin—the identity of their chalk and our own—the fine sections of our greensand and of the Wealden formation of Mantell—and to determine with us *in situ* the strict relations of their Neocomian rocks with those peculiar strata which at Atherfield, in the Isle of Wight, have been so admirably illustrated by Dr. Fitton and other native geologists, and of which such beautiful and accurate diagrams have been prepared by Captain Ibbetson.

It is utterly impossible that such gatherings together of foreign philosophers with our own should not be productive of much advantage; for he must indeed be a bad statist in science who knows not that numerous are the works of merit which are published in periodicals, or in the volumes of societies of one country which remain altogether unknown in another; and still less can he be acquainted with the present accelerated march of science, who is not aware that the germs of discovery which are lying ready in the minds of distant contemporaries must often be brought into action by such an interchange of thought. The collision of such thoughts may indeed be compared to the agency of the electric telegraph of our Wheatstone, which concentrates knowledge from afar, and at once unites the extremities of kingdoms in a common circle of intelligence.

But although the distinguished foreigners to whom I have adverted, and others, including our welcome associate M. Wartmann, the founder of the Vaudois society, and M. Prevost of Geneva, on whose merits I would willingly dilate if time permitted it, are now collected around us; many—among whom I must name M. de Caumont, the president of the French Society for the Advancement of Science—have been prevented from honoring us with their presence, because the national meetings in their several countries also occur in the month of September. To remedy this inconvenience, I ventured, when addressing you six years ago, at the Glasgow meeting, to express the hope that each of the national European societies might be led to abstain during one year from assembling in its own country, for the purpose of repairing by its own deputies to a general congress, to be held at Frankfort, or other central city, under the presidency of the universal Humboldt. Had the preparation of the “Cosmos,” and other avocations of that renowned individual, permitted him to accept this proposition—which I have every reason to believe the British Association would have supported—I am convinced that many benefits to science would have resulted, and that each national body, on reassembling the following year in its native land, would have more vigorously resumed its researches.

Adhering still to my project, I beg my countrymen and their foreign friends now present to sustain this proposition for centralizing in a future year the representatives of the various branches of science of different countries, when they may at once learn the national progresses respectively made, and when, at all events, they can so appoint the periods of their national assemblies as to prevent those simultaneous meetings in France, Germany, Scandinavia, Italy, Switzerland, and England, which are so much to be deprecated as interfering with a mutual intercourse.

Finally, my fellow-laborers in science, if by our united exertions we have done, and are doing, good public service, let me revert once more to the place in which we are assembled, and express on your part the gratification I know you experience in being on this occasion as well supported by the noblemen, clergymen, and landed proprietors around Southampton, as by its inhabitants themselves—an union which thus testifies that the British Association embraces all parties and all classes of men.

Seeing around me her majesty's secretary of state for foreign affairs, the speaker of the house of commons, and several persons of high station and influence, who willingly indicate by their presence the sense they entertain of the value of our conferences and researches, let us welcome these distinguished individuals as living evidences of that good opinion of our countrymen, the possession of which will cheer us onward in our career. And, above all, let us cherish the recollection of this Southampton meeting, which will be rendered memorable in our annals by the presence of the illustrious consort of our beloved sovereign, who, participating in our pursuits, in many of which his royal highness is so well versed, thus demonstrates that our association is truly national, and enjoys the most general and effectual support throughout British society, from the humblest cultivators of science to the highest personages in the realm.

Lord Palmerston moved, and the marquis of Northampton seconded, the thanks of the meeting to the president for his address; which having been carried by acclamation, Sir R. I. Murchison returned thanks—and the meeting was adjourned.

From the Southern Literary Messenger.

#### MEMORY.

THE past she ruleth. At her touch  
Its temple-valves unfold,  
And from their gorgeous shrines descend  
The mighty men of old:  
At her deep voice the dead reply,  
Dry bones are clothed and live,—  
Long perished garlands bloom anew,  
And buried joys revive.

When o'er the future, many a shade  
Of saddening twilight steals,  
Or the dimmed present to the soul  
Its emptiness reveals,  
She opes her casket, and a cloud  
Of cheering perfume streams,  
Till with a lifted heart we tread  
The pleasant land of dreams.

Make friends of potent Memory,  
Oh! young man in thy prime,  
And with her jewels bright and rare,  
Enrich the hoard of Time;  
Yet, if thou mockest her with weeds  
A trifer 'mid her bowers,  
She'll send a poison through thy veins,  
In life's disastrous hours.

Make friends of potent Memory,  
Oh! maiden in thy bloom,  
And bind her to thine inmost heart  
Before the days of gloom;  
For sorrow softeneth into joy  
Beneath her wand sublime,  
And she immortal robes can weave  
From the frail threads of Time.

Hartford.

L. H. S.

MISCELLANY.

GRAVE OF JOHN RANDOLPH.—A writer in the Norfolk Beacon describes a visit to the grave of this remarkable man. Speaking of the former residence of Mr. Randolph, he says:—

"After a ride of two or three hours, we entered a forest of tall oaks, and were told by Mr. Cardwell, that we were on Mr. Randolph's estate. Shortly, the houses that were occupied by the great and eccentric genius, appeared through the intervening trees, built up in the midst of the woods. Not a stump to be seen, not a bush grubbed up; all standing, as if the foot of man had never trodden there. Mr. Randolph would not suffer the primitive aspect of things to be disturbed in the least. Not a tree, or branch, or a switch, was allowed to be cut. During his absence in Europe, a limb of an oak, projecting towards a window of one of the houses, grew so near, that old Essex, fearing the window would be broken, cut the limb off. On Mr. Randolph's return, he at once discovered the mutilation; old Essex was called up, and the reasons demanded for cutting off the limb. The old negro told his master he feared the window would be broken. 'Then,' said Mr. Randolph, 'why did you not move the house?'"

The writer here met John, the former body-servant of Mr. Randolph, who treated him and his companion with great politeness, conducting them to the winter and summer-houses, and other objects of interest in the vicinity. We copy the description of his last resting-place:—

"At my request, John directed us to his master's grave, at the foot of a lofty pine, just a few steps in the rear of the summer-house. The place was selected by Mr. Randolph, twenty years before his death; and by his direction, the head was laid to the east, instead of the west, the usual position. It was observed to John that his master had ordered his body to be thus laid, that he might watch Henry Clay. John replied, that he had never heard him say anything of the kind. I suppose the position was preferred by Mr. Randolph, because it is the Indian sepulchral posture, his descent from Pocahontas, the Indian princess, being one of the things he much boasted of. A rude unchiselled mass of white rock, found by Mr. Randolph on a distant part of his estate, many years before his death, and used by him, at the door of one of his houses, as a washstand, marks the head of the grave. A huge mass of brown stone, also selected by Mr. Randolph, and used as a step-stone to mount his horse, marks the foot of the grave. These rocks were procured and kept for the purpose to which they are now appropriated, and particular direction given to John on the subject.

"I can never forget my emotion while standing over the unornamented grave of the gifted and eccentric Randolph. The tall, unbroken forest by which I was surrounded, the silence and gloom that reigned undisturbed amidst the deserted place, the thought of the brilliant mind that once animated the remains, then mouldering beneath the sod upon which I was standing, the vanity of earth's promises, and hopes and distinctions, impressed my heart and mind with a degree of solemnity and interest I was unwilling to dissipate."

PREJUDICE AGAINST INDIAN CORN.—A diabolical case of poisoning has occurred in the family of Dr. Grattan, of Drummond House, in the county of Kildare. In consequence of the potato failure, the Doctor wished to introduce Indian corn as a food for the people in the neighborhood; and he had a supply from Dublin. "Some prejudice against it having been manifested," Saunderson's News Letter reports, "Dr. Grattan, in order to remove it if possible, determined to use it in his own family; and upon finding that his domestic servants refused even to prepare it,

insisted on their doing so, and stood by until his directions were obeyed. Of the meal thus prepared he and all his children partook; in the kitchen, the servants refused to eat it; and their share was given to four calves, all of which died shortly after. The following morning, Dr. Grattan was actually engaged in investigating the extraordinary occurrence, which had immediately been spread abroad among the ignorant peasantry as the effect of the Indian corn, when his eldest son called him to breakfast, mentioning at the same time that they had just breakfasted on flummery, and, what was very curious, that they were every one of them sick and vomiting. And true it was: when he reached the house, he found Mrs. Grattan, the four children, and a servant-maid, exhibiting all the symptoms of poisoning by arsenic. The Doctor having by accidental absence escaped partaking of the poisoned food, was able to give instant assistance to the unfortunate sufferers, and had used the ordinary antidotes and remedies hours before medical assistance could possibly have reached them from any other quarter. To this most providential occurrence it may in all human probability be attributed that any of them are now living. In spite of every care, his eldest son died within twenty-one hours, and the others of the family are not out of danger." An inquest has been held on the son, a youth of fifteen, and a verdict returned implicating the cook. She has been committed to gaol.

SPECIE FREIGHT.—Captain John Gordon, brother of the Earl of Aberdeen, was tried by court martial on Wednesday, for sailing from Valparaiso to England with the America fifty-gun frigate, in disobedience of the orders of Rear-admiral Sir George Francis Seymour, the Commander-in-chief. The court was held on board the Victory, at Portsmouth, under the Presidency of Admiral Sir Charles Ogle. Captain Gordon was assisted in his defence by Mr. Hoskins, solicitor. Disobedience of orders was admitted, but the pressing nature of the case was pleaded. Upwards of 2,000,000 dollars had been shipped on board the America at Mazatlan and other places, to be conveyed to Valparaiso, there to be transhipped into another vessel of war and conveyed to England. The merchants addressed a strong representation to the British consul at Tepic, requesting him to use his influence with the commander-in-chief to induce him to allow the America to complete the voyage to England, to avoid the risk of having so large an amount of specie placed on board a small vessel; it was urged also, that as the insurance was effected on the America, a transfer of the risk to a smaller vessel might lead to difficulty in settling losses, should any occur. Owing to the length of time it would take to get an answer from the commander-in-chief, Captain Gordon, after consulting with his senior lieutenant and another officer of the civil branch, resolved to proceed to England. Mr. Hoskins repudiated the idea of his client's being actuated by any pecuniary motive; stating that he had directed his agents to pay the freight-money over to the captain by whose vessel the specie would have been brought to this country in regular course. Mr. Hoskins admitted that Captain Gordon had acted under an error in judgment. The officers consulted by him previously to sailing were examined; and their statement was, that at each station they had visited the usual naval force was present.

The court found the charge of disobedience to orders proved, but acquitted Captain Gordon of being actuated by motives of a pecuniary character. The sentence was, that he be severely reprimanded.

A QUESTION of much importance to life assurance companies has lately been decided by the judges in the Exchequer Chamber, on a bill of exceptions in an action brought by the representatives of Schwabe against the Argus Life Assurance Company. The



judges have determined that a party assured, holding his policy in his own hands, who may commit suicide, forfeits his policy, and that the office is not bound to pay the amount. This decision settles the law on a point upon which doubts had heretofore existed. The Argus Company, who, before trial, had offered to return all premiums paid, with interest, on the opinion of the judges in their favor being declared, immediately renewed their offer; and have now repaid to Schwabe's representatives the whole of the premiums received, with interest at four per cent., amounting to £969 8s. 7d. The company have at the same time resolved in future to return to the representatives of any party assured in their office who may commit suicide the gross amount of premiums paid on the assurance.—*Times*.

At a meeting of shareholders of the Metropolitan Joint Stock Conveyance Company, held on Monday, Major Hume explained that the object is to secure a cheap, expeditious, and punctual conveyance by omnibus through all parts of London and its suburbs; and the rate of charge to be two miles for two-pence, and so on.

The wires of the electric telegraph connected with the Munich and Augsburg railroad have been covered with a coating invented by Professor Stenheil, of Munich, which possesses the virtue of protecting them from lightning; thereby greatly tending to prevent accidents.

The Rhine and the Danube, and consequently the Black Sea and German Ocean, are now united by a canal just completed, called the "Ludwigs Kanal," after its creator, the king of Bavaria; who has thus realized, in our day, one of the vast conceptions nurtured eight hundred years ago in the brain of Charlemagne. A vessel of small burden now sailing from Rotterdam or from London, may carry its cargo through Bavaria, Austria, Hungary, and Wallachia, even to Trebizond and Constantinople; or if she be of large burden, may discharge her cargo at the mouth of the Rhine, and have it transhipped into smaller vessels at little expense.—*Morning Herald*.

**PLEDGED REPRESENTATIVES.**—The French Chamber of Deputies has made what we in England must account a strange decision—that the taking of pledges vitiates a deputy's election. Englishmen have the greatest personal dislike to submit to pledges; we deem it a plan proper to a system of delegation, whereas we consider ours a system of free representation; but to unseat a member for condescending to pledges, would be accounted a very extravagant act of purism. The arguments by which M. Guizot advocated the expulsion strike us as being not only "doctrinaire" in the highest degree, but as rather the dreams of a student in the closet than the practical reasons of a man out in the world. For instance, he boasts for the French constitution that there is arbitrary power in no part of it; while the use of the "mandat impératif," such as the Legitimist electors of Poitiers tendered to M. Dault, is an exercise of arbitrary will; so that to sanction it would be to establish arbitrary power, independent of discussion. This is very like nonsense. The so-called exercise of arbitrary power would still be subject to the influence of prior discussion, to the antagonism of other electors at the poll, to the voluntary submission of the candidate; and finally, it has no privilege for its own enforcement. A more shadowy monster never was conjured up. However, the upshot is that M. Dault is unseated, and that the chamber has forbidden the practice of taking pledges at elections. The legislature has a right, no doubt, to establish any such regulations; only one is sorry to see the illustrious assembly acting on such singularly bad reasons—reasons so bad as to make the act one of simple "arbitrary power."—*Spectr.*, 5th Sept.

**TAKE CARE OF YOUR CUSTOMERS.**—The Free Trade Association of Sheffield celebrated the passing of the great measures of the past session by a *soirée*, on the 2d of September, at the Music Hall. Good speeches were made by Lord Morpeth, as member for the West Riding, Mr. Parker and Mr. Ward, the borough members, Colonel Thompson, and Mr. R. R. Moore. The following resolution, pointed at certain movements now going on, was voted unanimously—

"That in case any serious attempts should be made by the Protectionist party to induce the legislature to retrace its steps, or prevent the final extinction of the corn-laws in February, 1849, this association shall be called into renewed existence."

On this Colonel Thompson delivered some quaint sentences of pregnant import—

"I should have been happy if it had so happened that these halcyon days had been occupied in searching for what remnants of fallacies might yet be left; that you might have trodden out the latest sparks, and not have left the remotest chance for any advantage being gained by your opponents. Affairs are not so settled as they might be. In America, the alteration of the tariff has been carried by a single vote; and it would be said that the cry for resorting to the old law should be encouraged by any shadow of success permitted here. We have too much at stake to afford to be incautious. We cannot risk the world's harmony, nor give a chance for losing the fruits of the great Peace society of our day. Wit in these times has taken a stride in power, and wit is only wisdom in disguise. The society of Friends, as you know, have a quiet but caustic wit of their own, and one of their members at Bristol has best expressed the truth. On occasion of some disturbance there, the yeomanry were turning out in arms; and as one of them was setting out, his Quaker partner said to him, 'John, take care thou dost not cut down any of our customers.' (*Great laughter and cheering.*) That is the principle which will win—the world will be much less willing than it has been to cut down one another's customers. In our own country, too, the change is equally apparent. Can you not perceive in your town the softening among those who have hitherto been the bitterest? There is no hatred against the aristocracy now. I speak not of our friends and leaders, but of those who have heretofore been the objects of popular dislike. The great act of justice which has taken place has softened all hearts and healed all warfares. The wildest man in the most savage country will yet be reached by the improvement of which you may be called the authors. In regions which seemed to be divided between the despot and the slave, the sense of common interest is amalgamating both into the admission of human comfort. The customhouse and the passport systems are everywhere coming down; and man will visit man without necessitating the magistrate's permission for the act."—*Spectr.*

**NUISANCES.**—At the Liverpool Assizes, judgment was given on a point of public interest. Sir John Gerard had sued Mr. Muspratt, the proprietor of the alkali works situated near Newton, for damages on account of injury to the plaintiff's plantations from the noxious gas emitted by the works. The tall chimney of the works is a striking landmark at the junction of the Liverpool and Birmingham railway with the Liverpool and Manchester, and well known to all travellers on the line. The case as made out by the plaintiff was essentially this. The estate of New Hall, on which Sir John Gerard lives, adjoins Mr. Muspratt's alkali works; and since their erection the trees have continued to fade and die, especially those which face the chimney. The gas emitted from the chimney is muriatic acid gas, which has a great affinity for water. In a damp day it combines with the moisture in the atmosphere,

and, being carried along by the wind, comes in contact with the trees and hedges, and is condensed upon the leaves and branches. Its immediate effect is to destroy the leaves; the bark then becomes affected; and the final result is to destroy the trees altogether. Up to the time that the works were established, Sir John's plantations were perfectly healthy. One of the witnesses, a timber surveyor, estimated the actual damage sustained during the past seven years at £5,826. On both sides, persons accustomed to rear and value trees, as well as scientific men, were examined. The plaintiff's witnesses attributed the damage to the alkali works; the defendants traced it to peculiarities of soil and management. After a trial, which lasted the greater part of two days, the jury returned a verdict for the plaintiff; damages £1,000.

Another trial was entered upon of a similar nature; Sir John Gerard being the plaintiff, and Messrs. Crossfield and others, proprietors of alkali works, the defendants. According to the plaintiff's witnesses, the damages sustained by those parts of Sir John's plantations subject to the action of the works was about £3,400. In this case the jury returned a verdict for £400 damages.

**FRENCH FREE TRADE.**—The Association of the Libre Echangistes held its inauguration meeting on Friday, in the Salle Montesquieu; the Duke d'Harcourt, peer of France, president of the society, in the chair. From 700 to 800 persons were present. The chamber, the press, and the commerce of the country, were represented at the meeting. The president addressed the company, demonstrating the advantages to be derived from the abolition of high protective duties and the introduction of liberal free-trade measures—

"Our plans," he said, "are simple and natural; the sincere friends of the country cannot do otherwise than go with us: after the conquest of our civil and religious liberties, we claim another, that of labor. We wish labor to be free, to be no longer loaded with those shackles which prevent it from developing itself, and from arriving at those results which should be expected from it. France is rich, strong, and wise enough, to bear such emancipation without any danger of her being led away by it."

The chairman concluded by stating that subscriptions were about to be opened to carry out the objects of the association; and that the funds so raised would be used in a manner best suited to advance its principles.—*Spectator*.

**BORDEAUX** has emulated Paris in doing honor to Mr. Cobden. The Libre-Echangistes of that city invited him to a banquet on the 1st inst.; at which upwards of three hundred gentlemen "assisted." Nor were the fair sex backward on the occasion, "the galleries being filled with elegantly dressed ladies." The chair was taken by M. Duffour-Dubergier, the mayor of Bordeaux; who was recently the guest of the free-traders at Manchester, and had now been entertaining Mr. Cobden as a guest for some days at his private house. Among the guests were Baron Sers, peer of France and prefect of the Gironde; M. Rouillet, first president of the Cour Royale; M. Dosquet, secretary-general of the prefecture; and M. Durin, one of the vice-presidents of the society of Libre-Echangistes. After the healths of the king, and of the queen and royal family, had been drunk with the "loudest acclamations," that of the English guest was proposed "with the greatest enthusiasm." Mr. Cobden returned thanks in a speech which was very able, but not new to the English reader; except, perhaps, in the emphatic enunciation of the dictum, "that free trade is association, and that monopoly is competition." The speech was received "with thunders of applause."—*Spectator*.

**AN UNJUST JUDGE.**—In a letter to the Times, Miss Agnes Strickland, authoress of the Lives of the Queens of England, prefers a charge of gross plagiarism against Lord Campbell. The fair complainant states, that if her life of Eleanor of Provence be compared with Lord Campbell's biography of the same princess, under the title of the "Lady Keeper" in his Lives of the Chancellors, it will be seen "that his lordship has published an abridgment of that which has now been before the public six years"—

"He has transposed the language a little in the course of his labors, to disguise the fact, and discreetly transferred the references which I honestly gave to my authorities to his own margins; but he has not put forth a single fact in addition to those which I had put forth in my life of Eleanor of Provence; merely curtailing my matter, but preserving the arrangement, and adding a coarse joke of his own. He has even availed himself of the quotations of the old chronicle rhymes, and some interesting particulars of the dress of that queen, for the benefit of the lawyers, which, with his important avocations, he would scarcely, I should imagine, have seriously referred to books of costume to collect for such a purpose, or known anything about, had he not found them conveniently under his eye, in connexion with the rest of the information which he has drawn from my work. I should have been proud of the conviction that anything from my pen had been of such great use to a learned dignitary of the law, and regarded his abridgment of my life of Queen Eleanor as one of the highest compliments that had been paid to my work, if his lordship had candidly referred to the source whence his information was derived; but he has carefully abstained from even alluding to the existence of a previously published life of that queen."

Miss Strickland asks, whether it is fair in Lord Campbell to appropriate to himself the credit as well as the benefit of her labors? "The benefit I would freely allow; but as my principal reward for the years myself and my sister have spent in the task of preparing the Lives of the Queens of England is the reputation acquired in the course of the undertaking, I cannot see without some feelings of pain the cool manner in which Lord Campbell has reaped my field, and passed off the produce as gleanings of his own."

"In other passages of this work he has not been quite so correct in his historical assertions. He makes, for instance, Edward IV. the husband of Lady Jane Grey; and has made some amusing mistakes with regard to Wriothesley. But I forbear to enlarge on his errors, having found him a very correct retailer of my facts; and it is but justice to add, that he has not once contradicted anything I have asserted in that portion of my work which he has used."

**THAMES TUNNEL.**—There was a very low tide on Sunday; and as the Venezuela, a large steamer, was proceeding down the river, for Havre, heavily laden, she grounded on the Thames Tunnel. It remained in this position for two hours; but no apparent injury has been done to the tunnel.

The French Scientific Congress opened its sittings at Marseilles on the 1st of September. An opening speech was delivered by M. Roux; after which, M. De Caumont was named president, and Messieurs. De Cussy, Forbin-Janson, Wulfrane Puget, and Canviere, vice presidents.

**FOREIGNERS DYING IN BRAZIL.**—A correspondent of the Times, writing from Rio de Janeiro, calls attention to the state of law of Brazil, which leads to the practical confiscation of property held by British subjects in that country. He describes this state of things to result from an effort on the part of the Brazilian government to retaliate upon England, for

Lord Aberdeen's slavery act, known in Brazil as "the Bill."

There are two legal functionaries—one styled "Juiz dos Orfaos," the other "Juiz dos Ausentes"—who are charged with the care of the property, left by persons dying *intestate*. Under this term are included all cases of wills not made in strict conformity with the laws of Brazil. "The Brazilian laws allow the testator to dispose of one third of his property as he may deem fit. He has heirs (*forçados*); they are, if he is unmarried, his father or his mother, if alive; if married, his children; not having children, then his parents; his brothers and sisters or next of kin are heirs, if he should die *intestate* only. A father may in some few instances disinherit his children: for instance, in the event of prostitution, having attempted his life, for refusing to be bail in any bailable offence, and also for (an offence alike disgraceful to the framer and the morality of the country where such a law is recognized) having intercourse with his father's mistress. In the event of any of his heirs being absent from this country, then the Juiz dos Ausentes steps in, and claims the custody of that part belonging to the absent; and it not unfrequently disappears in the cope of this guardian, more particularly if it has been long there uninquired for."

The chief illustration of the state of the law is drawn from the decision on the well-known case of Mr. George March; and its future operation is indicated—"At the death of any one partner or consignee, either resident here or elsewhere, the house and property will be taken possession of by the authorities, (the Juiz dos Orfaos and Juiz dos Ausentes,) and an inventory taken of all effects and outstanding debts; these will be valued by people appointed for the purpose. After this formality, a curador is appointed at the option of the Juiz. This is a post of pecuniary consideration, and much sought after by all his friends and dependants. It is the curador that collects all moneys, and orders the sale of the effects; and when of sufficient magnitude, not a few instances are wanting of their having decamped with the whole, seeing that Juiz dos Orfaos is a situation held at the pleasure of the minister, who, to free him from responsibility when any such accident occurs, removes him and appoints another (until the storm blows over); and this other when appointed gets out of the affair by referring to it as the act of his predecessor."

"Under the whole of these circumstances, no person can ship to this country with impunity. What with long credits and the risk of death to some of the parties interested, it will be next to impossible to escape for many years without a visitation from the Juiz. No gains can withstand the losses that would accrue from one such visitation; a second, within a few years, would prove ruinous to the longest purse."

Her majesty's ship *Serpent*, which arrived in England from China a few months since, conveyed, as one of the instalments stipulated for the evacuation of Canton and treaty of peace with that country, treasures in Sycee silver of the value of nearly £500,000; but, on opening one of the boxes, supposed to contain that species of bullion to the amount of £100,000 value, it was discovered to be filled with lead! Of course, immediate conference has been opened with the representatives of her majesty at Hong-kong, to obtain the required difference of payment.—*Nautical Standard*.

At Baden-Baden, lately, two strangers, an Englishman and a Prussian, quarrelled, according to a very common incident, over their play, and agreed, in the usual course, to fire at one another, as the recognized means of settling a dispute. The Englishman was so lucky as to win the first fire, and so unlucky as to miss his adversary. The latter had only now to

shoot his man at his ease, and prepared to take his aim accordingly; when the Englishman cried out, "Stop, stop! I'll buy your shot." The first impression made was that of the novelty of the proposal; the second, that it contained the preliminaries of a mutually profitable transaction. The conditions of the arrangement were accordingly entered upon; and the two leading elements were, that the Englishman was rich and the Prussian a good shot. The redemption was valued at £1,000; and the parties returned to the city alike satisfied with their bargain. The case is worth reporting; and we are glad it was the Englishman who set the first example of this clear insight into the rationale of duelling.—*Athenaeum*.

INTERNATIONAL COPYRIGHT.—The Gazette of Tuesday contains the orders in council ratifying the treaty of international copyright entered into with Prussia for the protection of "authors, inventors, designers, engravers, and makers of any of the following works, (that is to say,) books, prints, articles of sculpture, dramatic works, musical compositions, and any other works of literature and the fine arts in which the laws of Great Britain give to British subjects the protection of copyright;" also, regulating the duty to be henceforth charged on books and prints brought into this country from the Prussian dominions.—*Examiner*.

MURDER AND MUMMERY IN ITALY.—A letter from Ancona, dated August 1, gives a shocking description of the murder of Chevalier Stewart, in the vicinity of that place, and of the superstitious homage paid to his remains:—

"ANCONA, August 1.

"If you have not already heard through the public papers of a shocking crime that has been perpetrated in this vicinity, it is my painful duty to communicate the sad and atrocious deed. Our mutual friend, the Chevalier Abbé Stewart, was, on the 17th ult., most inhumanly and deliberately murdered on the shore between this and Sinigaglia. Poor Stewart put up at Cassabrugiate for a few days, for the benefit of sea bathing, previous to visiting the fair of Sinigaglia. On the morning of the 17th, he bathed at a secluded part of the shore, when a peasant approached him and tendered his services to hold an umbrella, which he accepted, and remunerated the man for his trouble, upon which the peasant inquired if Mr. Stewart intended bathing again in the evening. He replied he should, but would not require his services. However, the peasant dodged him to the shore between four and five o'clock in the afternoon, and waited his opportunity for committing his premeditated crime, having prepared, and partly manufactured, a long stiletto since the morning. He took advantage of the moment that Stewart was passing his shirt over his head, and inflicted three stabs, which Stewart received on his left arm, and at once faced his murderer, without weapon or covering to his body, and demanded his intentions. The wretch replied, 'Plunder.' Poor Stewart pointed to his clothes, watch, ring, and money, and besought him to take everything and decamp, and spare his life. The monster hesitated for a moment, and then rushed again upon Stewart, and stabbed him eight times more, two of which wounds extended to the whole length of the stiletto. Stewart fell, and the murderer made off with his things. Then poor Stewart rose to his feet, wrapped himself in a sheet, and proceeded nearly half a mile to the nearest cottage, falling twice before he could accomplish the distance. Medical aid from Monte Marciano soon reached him, but mortal aid was of no avail; about an hour after midnight he expired, praying fervently, and wonderfully composed to the last moment. Half an hour previous to his last gasp he took up a pen and wrote to his brother, who, I believe, is his heir, 'Dearest George,—I am dying. T. Stewart.'



"By poor Stewart's description, the assassin was arrested within an hour of the bloody deed. Though there is all necessary proof of the identity of the culprit, yet I apprehend the extreme penalty of the law may not reach him, being under age, (nineteen,) according to the laws of this country. I understand that in cases of great atrocity the pope can lead (as it is called here) a few years to the criminal. The British consul has represented this case to Rome, as one requiring the exertion of this power, and awaits the decision. The consul has had poor Stewart's body embalmed, and placed in the church of Santa Maria, previous to embarkation for England.

"Now comes the extraordinary and almost incredible sequel to this most melancholy and dreadful deed. The priests (I presume) having learnt that the deceased belonged to a rich family, began, as usual, to speculate upon what might turn up most to their advantage. All at once a child, a cripple from its birth, was cured by crawling over the coffin, and left his crutches there. The fame of this miracle spread throughout the town and neighborhood, and the lame and halt flocked in from all sides. Numerous other miracles are said to have been performed—offerings of wax began to drop in to the church—scores of children were brought in to be cured of all kinds of diseases. At length the crowds of deluded beings reached such an extent that the British consul feared they would destroy the coffin, and accordingly ordered it to be removed out of the body of the church to a vault; but this was an undertaking of some difficulty, and he was obliged to call in the aid of the gendarmes to close the chief entrance to the church, and get the crowd out by a back way, and prevent the populace outside from rushing in. By half past nine o'clock at night they succeeded in clearing the church, and removing the coffin. Next morning the church was again beset by crowds, who kissed and adored the ground upon which the coffin had been placed, and strewed it with flowers and garlands. It is said also that the ground has wrought miracles. It is said also that the priests will endeavor to oppose the consul when he claims the body for shipment, as they hope the family will canonize their relative, and let them reap the advantages attendant upon such ceremonies, leaving the body with them."

**LOUIS PHILIPPE AND HIS FAMILY.**—The king of the French is one of the best linguists of the present day. He speaks English, German, Spanish, and Italian, as if he was a native; and, although his opportunities of practice in them are rare, his memory is so good that he is never even for an instant at a loss for words. When at Eu, his habits are exceedingly regular. There, as in Paris, he passes a great portion of the time in writing, with his sister, Madame Adelaide, at his side. He rarely goes to bed before one or even two o'clock in the morning, but is up again at seven, or at the latest at eight, and frequently receives persons on business whilst he is dressing. In fact, not a minute of the eighteen or nineteen of the waking hours of Louis Philippe is lost. His food is of the simplest kind, and he seldom takes more than two or three glasses of wine. His health is good; for years he has not had one day of serious indisposition. He is, however, very susceptible of cold, and has frequent attacks of hoarseness; but they are of short duration, and his physicians are never called upon to doctor him. His remedies are rhubarb and Epsom salts. With his constitution and his habits he may live many years. In his domestic circle he is one of the most agreeable and pleasant of men; Darby and Joan were not more loving than Louis Philippe and his queen. They address each other in the kindest manner, as *mon ami* and *mon amie*; and with his children he is equally amiable and kind. He is always jocular

with them, even in his remonstrances. The Duke de Montpensier, from the liberal turn of his disposition, he calls Duke de *Depensier*; and sometimes he speaks of the Duke de Nemours, who has rather a haughty and imperious manner, as *le petit Bonaparte*. I am assured, however, that, now that the Duke of Orleans is dead, there is nothing characteristic of the old gentleman in either of his sons. They are all excellent young men, but there is none of the *bonhomie* in their nature that so particularly distinguishes the father. They seem to consider it necessary to wrap themselves up in their dignity; the father never loses his dignity, but never acts as if he felt that the persons around him would lose their respect for him as their sovereign through the familiarity that he exercises as a man. The most haughty of the sons is the Duke de Nemours; he is condescending and familiar only with persons whom he has long known, and the consequence is that, although no man can find in his general conduct anything to condemn, he is as unpopular as the poor Duke of Orleans was popular. The Prince de Joinville is more free, but his deafness makes him reserved at times when he would wish to unbend. The Duke de Montpensier is, as regards the *bonhomie* of character, the best of the lot, but he is still very young, and his character can hardly be said to be fully formed. The young Count de Paris, as a child, promises to have more of the grandfather than either of his uncles. He is an open-hearted boy, and has been well drilled by Louis Philippe in the duties of condescension and kindness. Should the king live ten years longer, we may expect to see the Count de Paris, at eighteen, what his lamented father was at the same age.—*Correspondent of the Globe.*

**SPONTANEOUS SOUNDS IN IRON AND STONE.**—Singularly illustrative of the much disputed property affirmed by the ancients of the sound emitted at sunrise by the statue of Memnon in Lower Egypt is the singular phenomenon of sound occasioned by the vibration of soft iron produced by a galvanic current. It was first discovered by Mr. Sage, and since verified by the observations of a French philosopher, M. Marian. The experiments were made on a bar of iron, which was fixed at the middle in a horizontal position, each half being enclosed in a large glass tube, around which were wound spirals of copper wire. A cord of copper wire was afterwards substituted for the two helices, and placed with its axis coincident with the axis of the bar. On completing the circuit, longitudinal sound, although feeble, could be distinguished, the bar of iron being a little lengthened or expanded in the direction of its axis. The origin of the sound has, therefore, been attributed to a vibration in the interior of the iron bar, or a new arrangement of the molecules; an explanation which has been more than once advanced for the mysterious phenomenon of the same kind connected with the history of the Memnonian statue.

**CONVICT SHIPS.**—Until a somewhat recent period, four and sometimes five prisoners slept together during the long voyage to Australia in one sleeping-berth. The prison-deck being entirely dark, neither employment nor instruction could be carried on. According to the improved method of fitting up these ships, there are tables and seats for the convicts on the prison-deck in messes of eight, and at night each convict has a separate sleeping-berth. Illuminators are introduced on each side of the deck, extending the whole length of the ship, and the convicts are thus enabled to read, write, and work. A religious instructor accompanies every party of male convicts. A useful collection of books and elementary lessons in reading, writing, and arithmetic has been provided, in order that school instruction may be carried on during the voyage.

**THE ITALIAN ORGAN BOYS.**—Jean Baptiste Baracoli, a wretched-looking little Italian boy, was charged, at the Thames police court, with stealing an "up-right piano-forte," (hurdy-gurdy,) the property of John Buelzein, of Saffron-hill.

The prisoner was one of a number of boys employed by Buelzein to play instrumental music in the street, and about a fortnight ago absented himself with the instrument that had been entrusted to him. He was found at his mother's house with the hurdy-gurdy in his possession. The prosecutor wished to forego the charge, and take the boy back, but the latter insisted on being taken before a magistrate.

The prisoner said, in a voice stifled with sobs, that he took the instrument home, not with the intention of stealing it, but because he was afraid to go back to his master's house, not having obtained the amount of money usually expected. The practice was for the boys to go out at nine o'clock in the morning, but as he had been severely punished on the 13th ult., and kept without food, he got up at five o'clock on the ensuing day to try and mend his fortune. Though travelling about the town until a late hour of the night, he was only able to procure twopence, and, being apprehensive of similar maltreatment, he was afraid to go back.

The magistrate said that he fully believed the correctness of the little fellow's statement, and the case was one which ought never to have been brought before him. There was not the slightest ground for the charge of felony, and the prisoner was more an object of pity than of punishment.

The case was discharged.

**THE ARRACACHA PLANT.**—A report was lately read to the Paris Academy, by M. Boussingault, in the name of a committee appointed to examine a paper by M. Goudot, on the nature of the plant arracacha, and the possibility of introducing it into Europe. It appears from the report that this plant comes to maturity under the same conditions of climate in South America, as the potato, and therefore M. Goudot infers that it might be cultivated in Europe. In good soil, it produces a root that weighs from four to six pounds; and an acre of land will yield, with good culture, sixteen or seventeen tons, which is one half more than the average yield of the potato. The root is said to have a fine flavor, and to be exceedingly nutritious.

**CURRENTS OF THE AIR AND OCEAN.**—We are too apt, perhaps, to form our notions of the great atmospheric currents from the character of the winds to which we are exposed upon the surface of the earth; but a little consideration and observation will enable us to correct this prejudice. The lower strata of the inferior currents are perpetually opposed by fixed obstacles—mountains, hills, rocks, forests, and the works even of man—against which they expend most of their force, and by which they are deflected and reflected, and broken into whirls and eddies, producing, by their momentum, fitful rarefactions and expansions, which impress us with their character of unsteadiness and irregularity. But it is not so with the upper strata or with the superior current. Even in stormy weather, the eye can often penetrate through breaks in the canopy of clouds, when it may be observed that the wind aloft is blowing with such steadiness and smoothness, as not to break the form of the lightest cur-cloud that floats in its bosom, and indicates the velocity of its course. The passage of balloons invariably indicates the same steadiness of course; and the experience of every aeronaut confirms the fact, that whatever may have been the velocity of his passage, in the upper regions of the air all around him was perfectly calm. A conflict indeed appears to take place at times at the junction of two opposing currents; but these are rare exceptions to the general rule. This state of the upper

and under surface of the atmosphere is not unaptly represented to us by the state of the two surfaces of the fathomless ocean, only that the situation of their great disturbances is reversed. The currents of the great deep flow in opposite compensating streams, like those of the atmosphere. The hot water of the equatorial regions flows with various deflections towards the poles, and is replaced by an under-stream of cooled water from the polar regions. The disturbing forces which are perpetually acting upon the surface often mask this movement; but they extend not to the lower current, which flows on undisturbed by the most furious storms, and the mighty billows which oscillate above.—*Daniell's Meteorology.*

**ITALIAN WOMEN vs. TIGHT-LACING.**—It is astonishing that our ladies should persist in that ridiculous notion, that a small waist is, and, *per necessitate*, must be, beautiful. Why, many an Italian woman would cry for vexation if she possessed such a waist as some of our ladies acquire only by the longest, painfullest process. I have sought the reason of this difference, and can see no other than that the Italians have their glorious statuary continually before them as models, and hence endeavor to assimilate themselves to them; whereas our fashionables have no models except those French stuffed figures in the windows of milliners' shops. Why, if an artist should presume to make a statue with the shape that seems to be regarded with us as the perfection of harmonious proportion, he would be laughed out of the city. It is a standing objection against the taste of our women the world over, that they will practically assert that a French milliner understands how they should be made better than nature herself.—*Letters from Italy.*

**PRICE OF LAND IN GERMANY.**—The pride of the German peasant is to be a small land-owner. The sacrifices made to gratify this longing are incredible, as is the tenacity with which he clings to his land in all changes of fortune. The price paid for small lots of land in the valley of the Wupper and the adjoining districts would frighten an English farmer. From 500 to 700 dollars per morgen, or £117 to £150 per acre, is no unusual price for arable and meadow land. What interest he gets for his investment seems never to cross a peasant's mind. The rent of small patches adjoining these houses is not proportionately high, although dear enough; ten or twelve dollars per morgen (£2 10s., or £3 per acre) is constantly paid in situations remote from the influence of towns. Building sites, especially those favorable for trade or manufactures, sell also as high as in England. The sum of 3000 dollars was paid a few years back for about an acre and a half of ground, on which some zinc works now stand, at Duisburg. This was equal to £500 per acre.—*Bosfield's Industry of the Rhine.*

UPWARDS of seven thousand tons of white gravel, says a New York paper, have been shipped from this city to London since the 15th of September, 1845. It is taken from the beach at Long Island, and used to beautify the parks and gardens of London!

MASSSES of iron and nickel, having all the appearance of aërolites or meteoric stones, have been discovered in Siberia, at a depth of ten metres below the surface of the earth. From the fact, however, that no meteoric stones are found in the secondary and tertiary formations, it would seem to follow that the phenomena of falling stones did not take place till the earth assumed its present condition.

In the duchy of Luxemburg a well is being sunk, the depth of which surpasses all others of the kind. Its present depth is 2336 feet—nearly 984 feet more than that of La Grenelle, near Paris. It is said that this immense work has been undertaken for working a large stratum of rock-salt.